As confidentially submitted to the Securities and Exchange Commission on December 23, 2025. This draft registration statement has not been publicly filed with the Securities and Exchange Commission and all information herein remains strictly confidential.

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM S-1
REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

Generate Biomedicines, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**2834**	**83-1630228**
(State or other jurisdiction of incorporation or organization)	**(Primary Standard Industrial Classification Code Number)**	**(I.R.S. Employer Identification Number)**

101 South Street, Suite 900
Somerville, MA 02143
(888) 469-0055

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Michael Nally
President and Chief Executive Officer
Generate Biomedicines, Inc.
101 South Street, Suite 900
Somerville, MA 02143
(888) 469-0055

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box: ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state or other jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED DECEMBER 23, 2025

Shares Generate : Biomedicines

Common Stock

This is the initial public offering of shares of common stock of Generate Biomedicines, Inc. We are offering shares of our common stock.

Prior to this offering, there has been no public market for our common stock. It is currently estimated that the initial public offering price per share will be between $ and $. We intend to apply to list our common stock on The Nasdaq Stock Market ("Nasdaq") under the symbol "GENB." We believe that upon the completion of this offering, we will meet the standards for listing on Nasdaq, and the completion of this offering is contingent upon such listing.

We are an "emerging growth company" and "smaller reporting company" as defined under the United States ("U.S.") federal securities laws and, as such, we have elected to comply with certain reduced reporting requirements.

Investing in shares of our common stock involves a high degree of risk. See the section titled "*Risk Factors*" beginning on page 16 to read about factors that you should consider before deciding to invest in shares of our common stock.

	Per Share	Total
Initial public offering price	$ —	$ —
Underwriting discounts and commissions(1)	$ —	$ —
Proceeds, before expenses, to us	$ —	$ —

(1) See the section titled "*Underwriting*" for additional information regarding compensation payable to the underwriters.

We have granted the underwriters the option to purchase up to an additional shares of common stock from us, at the initial public offering price, less the underwriting discounts and commissions.

The underwriters expect to deliver the shares of common stock on or about , 2026.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Goldman Sachs & Co. LLC **Morgan Stanley**

, 2026

EXPLANATORY NOTE

Pursuant to the applicable provisions of the Fixing America's Surface Transportation Act, we are omitting from this filing our audited financial statements for the year ended December 31, 2023, and unaudited interim financial statements for the nine months ended September 30, 2025 and 2024. While this financial information is otherwise required by Regulation S-X, we reasonably believe that it will not be required to be separately presented in our registration statement at the time of the public filing for the contemplated offering. We intend to amend the registration statement to include all financial information required by Regulation S-X at the date of such amendment before distributing a preliminary prospectus to investors.

Generate : Biomedicines

```
import multiprocessing as mp
import numpy as np
import os
from multiprocessing import Pool
from scipy.interpolate import interp1d
from .utils import grid_coords_freq


def au                    v('OMP_NUM                    unt()))


def                       ft=


                  np.
    retu


def _radial_distances(img_s          center=None):
    if center is None:
        img_size = img_shap
        half_img_size = im
        center = [hal                 _img_size]

    # generate gri                    center
    Xs,Ys = np.in
    diff = np.t                       enter
    R = np.sqrt                       >ij', diff,diff))
    return R


def radial_profile                    None, R=None):
    #optionally com          dial profile
    if R is None:
        R = _radial_distances(img.shape, center=center)
    R = R.astype(np.int32)

    # tbin is the weighted sum of pixels at distance R
    # nr is the number of bins at distance R
```

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Neither we nor the underwriters have authorized anyone to provide you any information or make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside of the U.S.: we have not, and the underwriters have not, done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the U.S. Persons outside of the U.S. who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of our common stock and the distribution of this prospectus outside of the U.S.

All trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus may be referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert their rights thereto.

Market, Industry and Other Data

The market data and certain other statistical information used throughout this prospectus are based on independent industry publications, governmental publications, reports by market research firms or other independent sources that we believe to be reliable sources. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We are responsible for all of the disclosure contained in this prospectus, and we believe that these sources are reliable; however, we have not independently verified the information contained in such publications. While we are not aware of any misstatements regarding any third-party information presented in this prospectus, their estimates, in particular, as they relate to projections, involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under the section titled "*Risk Factors*" and elsewhere in this prospectus. Some data are also based on our good faith estimates.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, including the sections of this prospectus titled "Risk Factors," "Cautionary Note Regarding Forward-Looking Statements," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited consolidated financial statements and the related notes included elsewhere in this prospectus, before making an investment decision. Unless otherwise indicated, all references in this prospectus to "Generate," the "company," "we," "our," "us" or similar terms refer to Generate Biomedicines, Inc. and its wholly owned subsidiary, or either or both of them as the context may require.

Overview

We are a clinical-stage generative biology company pioneering the AI revolution in biotechnology and drug design and development. Our vision is to program biology to generate optimal therapeutics for the greatest impact on human health. Central to our vision is the Generate Platform, designed to be a therapeutic area and protein modality agnostic system integrating computational innovation with scalable biohardware to address therapeutic challenges beyond the reach of traditional technologies. We have built our Generate Platform to be a tight and fully-integrated loop (design–build–test–learn) to create proprietary, therapeutically relevant data and differentiated molecular solutions for the biological challenges we aim to address. In addressing these challenges, the Generate Platform can engineer solutions against therapeutic targets starting from either existing reference proteins or by suggesting completely novel ones without a reference starting point, also known as *de novo* design. The Generate Platform's therapeutic potential has been demonstrated by successfully progressing three computationally engineered proteins into human clinical testing, the most advanced of which is GB-0895, an investigational long-acting anti-thymic stromal lymphopoietin ("TSLP") monoclonal antibody, which is enrolling patients in pivotal Phase 3 clinical trials for severe asthma. We also expect to advance two additional computationally generated oncology product candidates into Phase 1 clinical trials in
.

Biology is an information science. DNA encodes biological function through the way its sequence determines the structure and activity of the molecules it produces, which, in principle, makes biology programmable. In practice, however, the immense complexity of biology has made programming it very difficult. Historically, drug discovery has emphasized two general approaches to manage this complexity. One approach was an intentional, mechanically guided design approach at low-throughput. The other was a high-throughput experimental exploration approach that was generally less able to encode specific intent. We believe that dramatic reductions in the cost of compute and the cost of making and measuring DNA and proteins enable a new paradigm: intentionality at scale. In this paradigm, our generative models learn generalizable design principles from data to generate hypotheses at scale, and scalable experimental systems verify those hypotheses. The Generate Platform was built to implement this paradigm, generating large numbers of specific molecular and biological hypotheses in response to pre-specified therapeutic objectives and rapidly testing them. We believe intentionality at scale is foundational to achieving programmable biology: enabling systematic generation of medicines across therapeutic areas and protein modalities while producing proprietary data that improves our generative models over time.

The Generate Platform integrates generative and predictive models that learn design principles from proprietary data—*e.g.*, diffusion-based models (such as our Chroma model) and graph neural networks, among other architectures—with advanced experimental biohardware systems for scalable verification. Our biohardware systems include scalable DNA assembly, rapid protein production, and high-throughput, multiplexed assay miniaturization enabling us to measure up to billions of molecules per generation cycle, as well as a cryogenic electron microscopy ("Cryo-EM") core for high-content structural data generation, which has produced more than 250 structures in 2025 alone. These capabilities significantly reduce the cost and time per assay data point, tightening the loop between generative models and real-world biological verification.

The Generate Platform establishes modular capabilities that are designed to be deployed individually or in combination to engineer differentiated therapeutic candidates. We have successfully translated these modular capabilities to create programs and product candidates with therapeutic potential. For example, our lead product candidate, GB-0895, utilizes our binding affinity and developability optimization modules, and is currently enrolling patients in Phase 3 clinical trials for severe asthma, and is also being evaluated in a Phase 1b clinical trial for chronic obstructive pulmonary disease ("COPD"). We used binding affinity and developability optimization modules, as well as additional

modules, including functional optimization, to engineer our other product candidates, including GB-4362 and GB-5267. Investigational New Drug applications (“INDs”) were submitted for both GB-4362 and GB-5267 in early December 2025, and, subject to receiving authorization from the U.S. Food and Drug Administration (the "FDA") to proceed, we expect to dose the first patient for both programs in .

Our lead product candidate, GB-0895, an investigational long-acting anti-TSLP monoclonal antibody in development for severe asthma is intended to be dosed every six months ("Q26W"). Severe asthma represents a substantial unmet medical need, with industry sources suggesting that only 15% to 25% of eligible patients receive biologic therapy. There are adherence and persistence challenges with existing shorter-acting biologic agents and GB-0895’s potential Q26W dosing regimen is designed to reduce injection frequency to address these challenges. We have engineered GB-0895 to have ultra-high binding affinity, reaching an estimated twenty-fold improvement over tezepelumab (106 femtomolar binding affinity) and a YTE amino acid modification, a clinically-validated half-life extension technology. A YTE amino acid modification is a specific change made to three amino acids (M252Y/S254T/T256E) in an antibody’s fragment crystallizable ("Fc") region. Preclinical and Phase 1 clinical data for GB-0895 have demonstrated favorable safety results, long half-life (approximately 98 days), and suppression of key biomarkers, such as blood eosinophils (“EOS”), fractional exhaled nitric oxide (“FeNO”), IL-5, and IL-13, supporting its potential Q26W dosing regimen. We are currently enrolling patients in two parallel global Phase 3 clinical trials for GB-0895 initiated in December 2025 (SOLAIRIA-1 and SOLAIRIA-2) for severe asthma, with full enrollment expected by .

In parallel, we are currently conducting a Phase 1b clinical trial for moderate-to-severe COPD with expected data in . COPD is a widespread and often fatal lung condition. Current biologics target patients with higher eosinophil counts, leaving the majority of patients without an approved biologic option. The Phase 1b COPD trial for GB-0895 is evaluating safety, tolerability, pharmacokinetics (“PK”), pharmacodynamics (“PD”) and immunogenicity. Preliminary data showed biomarker reductions and a PK profile consistent with our earlier Phase 1 asthma trial for GB-0895 for the treatment of mild-to-moderate asthma, supporting an extended dosing interval in COPD. We plan to evaluate multiple approaches to determine the optimal development path for GB-0895 in COPD, taking into account expected clinical timelines, regulatory feedback, costs and the clinical data from our Phase 1b trial.

In addition to progressing GB-0895, we are advancing additional programs and product candidates that leverage the Generate Platform’s modular capabilities. These include GB-4362, a systemically administered monoclonal antibody designed to neutralize free monomethyl auristatin E ("MMAE") as an adjunctive therapy to antibody-drug conjugate (“ADC”) molecules with an MMAE payload, as well as GB-5267, an armored, MUC16-directed CAR-T cell therapy candidate developed in collaboration with Roswell Park Comprehensive Cancer Center ("Roswell Park"), for solid tumors, initially targeting platinum-resistant ovarian cancer. Beyond these product candidates, we are advancing additional preclinical programs, including a next-generation ADC that is being developed as an internal program, and a bispecific T-cell engager that is being developed in collaboration with The University of Texas M.D. Anderson Cancer Center ("MD Anderson"). In addition, the Generate Platform’s modular capabilities underpin the undisclosed programs being developed in collaboration with Amgen Inc. ("Amgen") and Novartis Pharma AG ("Novartis").

We are led by an experienced team of executives with backgrounds in leading pharmaceutical and life sciences companies and academia and deep experience in generative biology and computational sciences, supported by a distinguished board of directors. We were founded in 2018 by Flagship Pioneering, bringing together advancements in generative biology and computational protein science.

The Generate Platform and Our Modular Capabilities

Since inception, the Generate Platform was designed to create differentiated protein therapeutics and unlock the promise of a new method of designing drugs through a concept we call programmable biology. For biology to be programmable, it means that we must be able to design, write, and execute biological functions with pre-specified intent, across therapeutic areas and protein modalities.

Our Generate Platform is designed to implement intentionality at scale by coupling AI models that generate large numbers of design hypotheses with scalable biohardware that verifies them. Each time we engineer, build and then test a set of hypotheses, which we refer to as a generation cycle, we generate experimental data that is intended to improve the Generate Platform. We package certain of these learnings into reusable modules—validated capabilities that can be applied across targets and modalities towards differentiated therapeutics.

Our Generate Platform has enabled us to develop numerous modular capabilities, many of which have already demonstrated the ability to successfully translate computationally engineered proteins into human clinical testing, including our lead product candidate GB-0895, which is currently enrolling patients in Phase 3 clinical trials for the treatment of severe asthma. In addition, we are currently exploiting our modular capabilities for other potential therapeutic applications, including for use in oncology and other historically difficult to treat diseases.

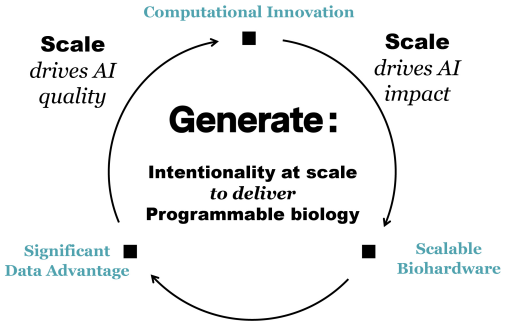
The Generate Platform

We built the Generate Platform on a foundation of integrating computational innovation with scalable biohardware to create a significant data advantage and drive differentiated molecular solutions for the biological and therapeutic challenges we aim to address, as illustrated in the figure below.

The Generate Platform is designed to systematically decode and comprehend biology at speed and magnitude

ML scales hypotheses
- molecules and biological hypotheses generated at scale using models + agents

Data compounds
- each cycle creates proprietary therapeutically-relevant data that improves the next cycle

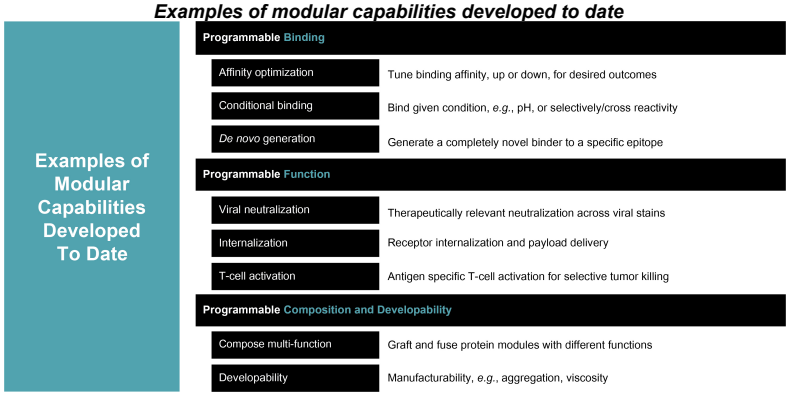


Modular Capabilities & Potential Therapeutic Impact

To date, we have deployed our Generate Platform to establish numerous modular capabilities, many of which we can now reliably and repeatably direct towards developing future therapeutic candidates. Our initial focus in building modular capabilities was on one of the most fundamental ways proteins mediate biology: binding. We have leveraged this starting point to expand our capabilities to include (i) binding with context, including selective and conditional target binding, and (ii) protein design for a desired function; in parallel, we have invested in a set of capabilities focused on developability. We have already seen the translational impact of our established modules in our first three clinical product candidates, as

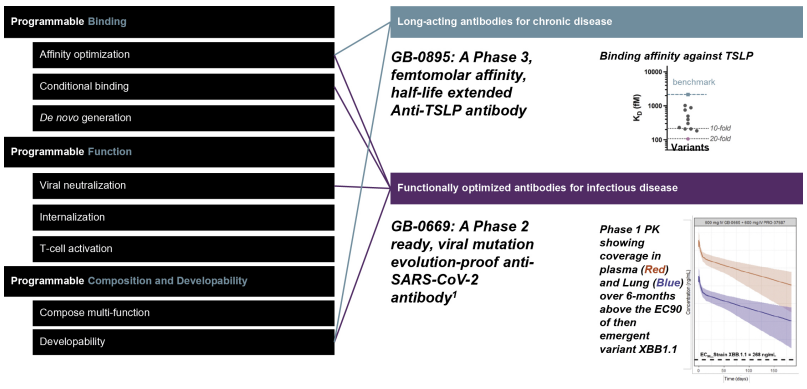
well as in two additional product candidates that are anticipated to enter clinical trials in . Examples of our current modules and the intended purposes are summarized in the figure below.

Examples of modular capabilities developed to date



We have built these modular capabilities with the intent to explore and decode biological challenges with a direct link to a therapeutic opportunity. For example, many biologics require a drug developer to "tune" the binding of antibodies to a target, otherwise known as binding affinity. Previously, this would have taken multiple cycles of library generation and screening, often with limited ability to reliably reach a specific affinity window, such as very high affinities in picomolar or femtomolar ranges. In contrast, our generative models propose new proteins with intent to increase, decrease or engage in selective binding depending on what is needed in the given program context. These diverse modules can be used alone, or in combination with one or more other modules, to generate unique proteins that are designed to address important therapeutic challenges. As shown in the figure below, two examples of proteins we designed that utilize our modules include our lead product candidate, GB-0895, and a functionally optimized antibody to neutralize a virus that has otherwise demonstrated meaningful resistance against all other approved antibody therapies. These examples reflect our deep conviction: programmable biology is only possible when therapeutic intent, computational engineering and biological data generation operate as a unified system to enable intentionality at scale and a compounding data advantage over time.

Application of modular capabilities to therapeutic applications



[1] Development paused for commercial reasons.

As we develop our Generate Platform and its modular capabilities, we are focused on translating their potential into meaningfully differentiated therapeutic development programs. Initially, we pursued therapeutic opportunities in which our modular capability or combinations of modular capabilities are likely to solve a molecular challenge in areas of well-understood biology. We believe that this approach allowed us to shift risk to the preclinical setting, where we can quickly identify differentiated proteins with the desired attributes. If we successfully engineer desired proteins, we believe it will unlock our ability to develop therapeutic candidates that can be moved into clinical testing with lower risk and potentially differentiated product profiles, thereby creating the potential for outsized patient impact and value. One or more of these modules can also be deployed to address therapeutic opportunities with potential partners, enabling an additional value generation route for us, as exemplified by our Amgen and Novartis collaborations.

Through deploying our Generate Platform towards therapeutic opportunities, we have seen a significant impact on the speed, cost and probability of success of drug design and development as summarized in the below figure.

Impact of the Generate Platform relative to traditional drug discovery

	Traditional drug discovery *laborious, high-cost exploration*		**Generate:** programmatic, at-scale prosecution
Time to proof of concept	6 - 8 years	❯	**3 - 5 years[1]**
Cost to proof of concept	$380mm	❯	**$25 - 60mm[1]**

Generate demonstrated success in translating our technology to product candidates:
- 8 programs successfully reached candidate nomination
- Created 5 clinical / clinic-ready product candidates
- 2 / 2 product candidates for which we initiated proof of concept trials achieved clinical proof of concept

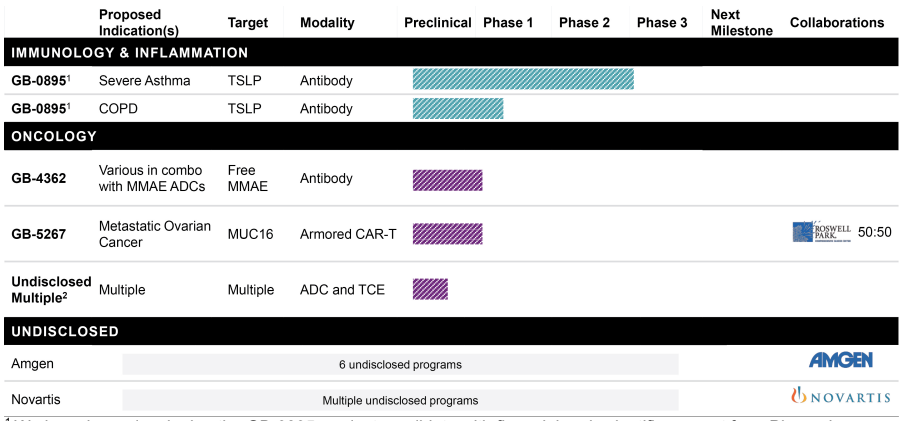
[1] Referring to approximate time and R&D cost from the first generation cycle to clinical proof of concept for GB-0895 and GB-0669.

Building on these efficiency gains, we are deploying our reusable modular capabilities to tackle increasingly complex biological challenges, such as engineering receptor-mediated internalization or conditional binding, each tightly linked to significant therapeutic opportunities. Capabilities such as these are being deployed in our early-stage pipeline. In parallel, we continue to innovate and invest across the Generate Platform to further lower the time and cost required to design, build and test each new hypothesis, so we can learn faster from real-world biology and build a compounding advantage over time. We believe this will expand the modular capabilities we can deploy, broaden the set of challenges we can reliably address, and ultimately translate into differentiated future product candidates.

Our Pipeline

We leveraged our initial Generate Platform modular capabilities to develop our first product candidates with differentiated features that focused on targets with well validated disease biology. This approach allowed us to significantly decrease the time and, we believe, the risk to advance our first product candidates to late-stage clinical development.

Our current pipeline of product candidates is summarized in the figure below:



[1] We have been developing the GB-0895 product candidate with financial and scientific support from Pioneering Medicines 02, Inc. ("PMCo"), an affiliate of Flagship Pioneering, Inc. ("Flagship Pioneering"). See the section titled *"Business—License and Collaboration Agreements—Collaboration Agreement with PMCo."*

[2] One program includes 50:50 collaboration with MD Anderson.

GB-0895: An Anti-TSLP Monoclonal Antibody

GB-0895 is a long-acting anti-TSLP monoclonal antibody intended to be dosed every six months ("Q26W") designed using our Generate Platform to address unmet needs in respiratory diseases. We are initially developing GB-0895 for the treatment of severe asthma. TSLP is a clinically and commercially validated target in severe asthma and has demonstrated broad potential in Type 2 and Non-Type 2 inflammatory diseases in clinical trials by third-parties. We are currently enrolling patients in two Phase 3 clinical trials of GB-0895 for the treatment of severe asthma (SOLAIRIA-1 and SOLAIRIA-2) following promising data in mild-to-moderate asthma patients in our Phase 1 clinical trial.

In its Phase 1 clinical trial for the treatment of mild-to-moderate asthma patients, GB-0895 demonstrated a favorable safety profile, long half-life and suppression of key biomarkers supportive of a Q26W dosing regimen using a single 300 mg subcutaneous injection:

- Long half-life showed sustained drug concentration for the full six-month period.
- EOS, FeNO, IL-13 and IL-5 biomarkers indicated deep and sustained reductions over six months.
- Total TSLP demonstrated target saturation.
- GB-0895 was generally well tolerated, with low ADA and no impact from ADA observed on PK profile.

Preclinical and clinical data demonstrated ultra-high affinity inhibition of TSLP signaling, with a 106 femtomolar binding affinity for TSLP and a mean terminal half-life of approximately 98 days in adults with mild-to-moderate asthma, which, together with quantitative PK/PD modeling, support evaluation of a subcutaneous Q26W dosing regimen. If approved, this dosing regimen, which is being evaluated in our Phase 3 clinical trials, would represent a potentially significant improvement to approved biologic therapies, which are typically dosed every two to eight weeks.

In parallel, we are also assessing GB-0895 in an ongoing Phase 1b expansion trial in moderate-to-severe COPD patients. As of November 7, 2025, preliminary data for GB-0895 from the Phase 1b COPD expansion trial showed reductions in key biomarkers and a PK profile generally consistent with the Phase 1 mild-to-moderate asthma trial:

- Preliminary EOS reduction data showed overlapping reductions between 300 mg and 600 mg. Both doses demonstrated ~50% reductions in EOS and indicated strong signal of PD activity.
- Preliminary FeNO reduction data showed overlapping reductions between 300 mg and 600 mg. Both doses demonstrated ~20-25% reductions in FeNO, although reductions overlapped with the placebo cohort.
- At week 8, both IL-13 and IL-5 showed ~50% reductions, although reductions overlapped with the placebo cohort for IL-13.

We also plan to evaluate multiple approaches to determine the optimal development path for GB-0895 in COPD, taking into account expected clinical timelines, regulatory feedback, costs and the clinical data from our Phase 1b trial. As part of such evaluation, we plan to seek engagement with regulatory authorities in to discuss our development strategy and obtain regulatory feedback on our proposed approach. We will also consider whether to pursue other indications in the future.

GB-4362: An MMAE Payload Neutralizer Monoclonal Antibody

GB-4362 is designed to selectively bind and clear circulating MMAE released from ADCs while preserving intratumoral payload delivery and anti-tumor activity of the ADC. We submitted an IND for GB-4362 in early December 2025, and we expect to initiate a Phase 1 dose-escalation trial in combination with enfortumab vedotin (“EV”) plus pembrolizumab in , subject to receiving authorization from the FDA to proceed. This clinical trial is designed to primarily assess GB-4362’s safety and tolerability, characterize the PK/PD effects of GB-4362, including reductions in free MMAE, and identify a recommended Phase 2 dose. In the expansion portion of this clinical trial, we intend to evaluate GB-4362's safety, PK/PD and impact on free MMAE reduction. We are considering using this expansion portion of the clinical trial as an early proof of concept, and if we determine to proceed, we plan to evaluate the impact of GB-4362 on progression from Grade 1 to Grade 2 peripheral neuropathy in patients who develop their first sustained Grade 1 peripheral neuropathy while receiving EV plus pembrolizumab for the treatment of first-line metastatic urothelial cancer ("1L muC"). In preclinical mouse and non-human primate (“NHP”) studies, GB-4362 demonstrated dose-dependent reductions in systemic free MMAE exposure. Preclinical data suggest that a 50% or greater reduction in free MMAE may improve tolerability, reduce dose-limiting toxicities and maintain ADC dose intensity. As development progresses, we may explore the potential of GB-4362 in additional combinations with approved or in development MMAE-ADC regimens. This is intended to allow us to broaden our focus to additional tumor types where MMAE-related toxicities limit therapeutic benefit.

GB-5267: A MUC16 CAR-T Cell Therapy

GB-5267 is an armored, MUC16-directed CAR-T cell therapy engineered using the Generate Platform to address unmet needs in solid tumors, which we are initially developing for the treatment of platinum-resistant ovarian cancer. GB-5267 was designed to have a high-affinity MUC16 binder and cytokine-based armor in order to enhance T-cell activation, proliferation and persistence within the tumor microenvironment ("TME") while maintaining strict MUC16-dependent specificity. We are developing GB-5267 in collaboration with Roswell Park, who submitted an IND to the FDA for GB-5267 in early December 2025. We plan to initiate a Phase 1 clinical trial in , subject to receiving authorization from the FDA to proceed. This open-label trial will assess safety and tolerability following intravenous dose escalation and could subsequently explore in combined intravenous and local intraperitoneal administrations in an expansion cohort. Secondary objectives are expected to include PK/PD assessments, characterization of CAR-T cell persistence and preliminary anti-tumor activity. In preclinical studies, GB-5267 showed proliferation and cytotoxicity across multiple donors and no activity on MUC16-negative cells. As we evaluate GB-5267 clinically, we may investigate its use in earlier-line ovarian cancer settings if it shows benefit in later-line ovarian cancer.

Our Strategy

Since our formation, we have focused on investing in our differentiated Generate Platform to unlock a new way of designing and developing drugs by integrating computational and experimental innovations. We believe these investments move us closer to a paradigm of programmable biology where drug discovery becomes more akin to engineering than traditional methods.

To move the company toward our vision, we focus on the following key strategic initiatives:

- Progress our advanced clinical-stage lead product candidate, GB-0895.

- Advance our next wave of clinical and preclinical product candidates in a broad range of indications, starting with oncology.
- Advance our Generate Platform to scale productivity, unlock new modular capabilities and translate additional differentiated programs and product candidates.
- Establish additional partnerships and collaborations to maximize value from and for our Generate Platform.

Our Team

Our company is led by a team of executives who collectively bring decades of experience from leading pharmaceutical and life sciences companies and academia and deep experience in generative biology and computational sciences. Our Chief Executive Officer, Michael Nally, M.B.A., joined us in 2021 after an 18-year career at Merck & Co., Inc. ("Merck"), where he served as Chief Marketing Officer overseeing global strategy for a $40 billion portfolio and as President of Global Vaccines. Our Co-Founder and Chief Technology Officer, Dr. Gevorg Grigoryan, Ph.D., is a leading protein scientist who drives the development of our Generate Platform and has authored more than 50 peer-reviewed publications in journals including *Nature*, *Science* and *PNAS*. Our Chief Financial Officer, Dr. Jason Silvers, M.D., J.D., brings more than 20 years of finance experience, previously serving as a Partner at Goldman Sachs & Co. LLC, where he advised on more than $400 billion in global transactions and where he most recently co-led the EMEA healthcare investment banking group. Dr. Laurie Lee, M.D., our Chief Medical Officer for Immunology & Inflammation, leads late-stage clinical development across our immunology portfolio and previously held senior R&D roles at CSL Behring LLC and GSK plc, where she led development of the Trelegy Ellipta asthma program from Phase 2 through global regulatory submissions that led to approval. Dr. Dinesh de Alwis, Ph.D., our Senior Vice President and Head of Clinical Drug Development, is an accomplished drug developer with more than 25 years of industry experience, including a decade at Merck contributing to the development of pembrolizumab.

Beyond our exceptional leadership team, we have assembled a multi-disciplinary team with deep scientific, clinical, technological, and operational expertise across biotechnology, machine learning and drug discovery and development. In this regard, as of December 31, 2025, we employed M.D.s and Ph.D.s with advanced degrees and experience across multiple therapeutic areas and in fields such as biologic engineering, biochemistry, biomedical engineering, biophysics, biostatistics, chemistry, physics, computer science and PK/PD.

Our Beginnings: Generate and Flagship Pioneering

Flagship Pioneering founded Generate in 2018 as Flagship VL56, Inc., working together with Dr. Gevorg Grigoryan, Ph.D., our founding Chief Technology Officer. In 2019, Flagship VL56, Inc. was combined with complementary generative biology explorations from another Flagship Company, Flagship VL57, Inc. Flagship Pioneering invents and builds platform companies, each with the potential for multiple products that transform human health, sustainability and beyond. Generate's founding team is the Flagship Pioneering origination team led by co-founders Dr. Noubar Afeyan, Ph.D., Founder and Chief Executive Officer of Flagship Pioneering, Dr. Geoffrey von Maltzahn, Ph.D., Dr. Avak Kahvejian, Ph.D., Dr. Molly Gibson, Ph.D., other scientists at Flagship Pioneering, and Dr. Grigoryan.

Generate was based on an exploration of the following question: What if we could generate novel protein therapeutics using generative AI tools, without having to discover them through trial and error? The team set out to explore whether advances in generative AI, large-scale protein sequence and structural data, and high-dimensional modeling could unlock a systematic, AI-first approach to creating new therapeutic proteins.

Recognizing the deep scientific synergy between Flagship Pioneering's data-driven exploration and Dr. Grigoryan's pioneering insights into the learnable, recurring structural patterns that govern how proteins fold and function, Flagship Pioneering brought these efforts together to launch the world's first generative biology platform capable of learning the underlying rules of protein function and generating novel therapeutic candidates on demand. Since our inception, we have continued to build on this foundation, advancing our platform, expanding our discovery and development capabilities, and assembling a leadership team committed to translating this new approach into transformative medicines for patients.

Summary of Material Risks Associated With Our Business

Our business is subject to a number of risks of which you should be aware before making an investment decision. These risks include, but are not limited to, the following:

- We are a clinical-stage biotechnology company with a limited operating history and no products approved by regulators for commercial sale, which may make it difficult to evaluate our current and future business prospects.
- Even if this offering is completed, we will require substantial additional capital to finance our operations in the future. If we are unable to raise such capital when needed, or on acceptable terms, we may be forced to delay, reduce or eliminate programs, product candidates (including clinical trials), investments in our Generate Platform or future commercialization efforts.
- Our management and our independent registered public accounting firm have concluded that there is substantial doubt as to our ability to continue as a going concern. If we cannot continue as a going concern, our stockholders may lose some or all of their investment in our company.
- We are dependent on the success of our product candidates, including GB-0895, GB-4362 and GB-5267, and our ongoing and anticipated trials may not be successful.
- Our approach to the engineering and development of our programs is unproven, and we may not be successful in our efforts to identify and develop any programs and product candidates of commercial value by leveraging our Generate Platform.
- We are substantially dependent on the successful application of our Generate Platform to develop programs and product candidates that can be commercialized by us or our current or future collaboration partners.
- Issues relating to our use of AI in the identification of our programs and the engineering and development of our product candidates could adversely affect our business and operating results.
- Preclinical and clinical development is inherently lengthy and uncertain. Preclinical and clinical trials of our product candidates may be delayed, and certain programs may never advance in the clinic or may be more costly to conduct than we anticipate, any of which would have a material adverse impact on our Generate Platform or our business.
- We are currently enrolling patients in clinical trials for GB-0895 globally and may in the future conduct clinical trials for other product candidates outside the United States, and the Regulatory Authorities (as defined below) may not accept data from such trials.
- If our clinical trials fail to replicate positive results from earlier preclinical studies or clinical trials conducted by us or third-parties, we may be unable to successfully develop, obtain regulatory approval for or commercialize our product candidates.
- Due to the significant resources required for drug development and depending on our ability to access capital, we intend to prioritize the development of GB-0895 for severe asthma. Moreover, we may fail to expend our limited resources on the development of GB-0895 for the treatment of other indications or for the development of other potential future product candidates that may have been more profitable or for which there is a greater likelihood of success.
- The regulatory approval processes of the Regulatory Authorities are lengthy, time-consuming and inherently unpredictable, and if we are not able to obtain, or if there are delays in obtaining, required regulatory approvals, we will not be able to commercialize, or will be delayed in commercializing, product candidates we may develop, and our ability to generate revenue will be materially impaired.
- We rely on third-parties for the supply and manufacture of our product candidates for our research, preclinical and clinical activities, and may do the same for commercial supplies of our products, if approved. As our pipeline increases and matures, the increased demand for supplies from our manufacturers may increase the risk that we will not have sufficient supply when needed or at an acceptable cost.
- We depend on sole source and limited source suppliers for certain drug substances, drug products, raw materials, samples, components, and other materials used in our product candidates. If we are unable to source these supplies on a timely basis, or establish

longer-term contracts with our suppliers, we will not be able to complete our clinical trials on time and the development of our product candidates may be delayed.

- The product candidates we develop may be complex and difficult to manufacture. We may encounter difficulties in manufacturing, product release, shelf life, testing, storage, supply chain management or shipping. If we or any of our CDMOs (as defined below) encounter such difficulties, our ability to supply material for clinical trials or any approved product could be delayed or stopped.
- We have in the past entered into, and in the future may enter into, partnership, collaboration and licensing arrangements with third-parties to support development of programs product candidates. If these partnership, collaboration and licensing arrangements are not successful, our business could be adversely affected.
- Our success is largely based upon our intellectual property and proprietary technologies, and we may be unable to adequately protect and/or enforce our intellectual property.
- If we do not obtain sufficient patent term for our product candidates, our business may be materially harmed.
- The biopharmaceutical market is intensely competitive. If we are unable to compete effectively with existing drugs, new treatment methods and new technologies, we may be unable to successfully commercialize any drugs that we develop.
- An active trading market for our common stock may not develop.
- The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock in this offering.

The summary risk factors described above should be read together with the text of the full risk factors in the section titled "*Risk Factors*" and the other information set forth in this prospectus, including our audited consolidated financial statements and the related notes, as well as in other documents that we file with the Securities and Exchange Commission (the "SEC"). The risks summarized above or described in full elsewhere in this prospectus are not the only risks that we face. Additional risks and uncertainties not presently known to us, or that we currently deem to be immaterial may also materially adversely affect our business, financial condition, results of operations and future growth prospects.

Corporate Information

We were incorporated under the laws of the State of Delaware. Flagship Pioneering incorporated our company in August 2018 under the name Flagship VL56, Inc., and we changed our name to Generate Biomedicines, Inc. in February 2020. Our principal executive offices are located at 101 South Street, Suite 900, Somerville, MA 02143, and our telephone number is (888) 469-0055. We have one subsidiary, Generate Biomedicines Securities Corporation, formed in 2021 under the laws of the Commonwealth of Massachusetts. Our website address is *www.generatebiomedicines.com*. The information contained in or accessible from our website is not incorporated into this prospectus, and you should not consider it part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended (the "JOBS Act"). As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include:

- being permitted to present only two years of audited consolidated financial statements, in addition to any required unaudited interim consolidated financial statements, with correspondingly reduced "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" disclosure in this prospectus;
- reduced disclosure about our executive compensation arrangements;
- not being required to hold advisory votes on executive compensation or to obtain stockholder approval of any golden parachute arrangements not previously approved;

- an exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"); and
- an exemption from compliance with the requirements of the Public Company Accounting Oversight Board regarding the communication of critical audit matters in the auditor's report on the consolidated financial statements.

We may take advantage of these exemptions for up to five years or such earlier time that we are no longer an emerging growth company. We may choose to take advantage of some but not all of these exemptions. We would cease to be an emerging growth company on the date that is the earliest of (i) the last day of the fiscal year in which we have total annual gross revenues of $1.235 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of the completion of this offering; (iii) the date on which we have issued more than $1.0 billion in non-convertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the SEC. We have taken advantage of reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock. Additionally, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption and, therefore, while we are an emerging growth company we will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not emerging growth companies. As a result of this election, our consolidated financial statements may not be comparable to those of other public companies that comply with new or revised accounting pronouncements as of public company effective dates. We may choose to early adopt any new or revised accounting standards whenever such early adoption is permitted for private companies.

We are also a "smaller reporting company," meaning that the market value of our shares held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our shares held by non-affiliates is less than $250 million or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our shares held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company, we may choose to present only the two most recent fiscal years of audited consolidated financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

THE OFFERING	
Common stock offered by us	shares.
Option to purchase additional shares of common stock	We have granted a 30-day option to the underwriters to purchase up to additional shares of common stock from us at the public offering price, less underwriting discounts and commissions.
Common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise their option to purchase additional shares of common stock in full).
Use of proceeds	We estimate that the net proceeds from the sale of our common stock in this offering will be approximately $ million (or approximately $ million if the underwriters exercise their option to purchase additional shares of common stock in full), based on the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We currently intend to use the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, primarily to (i) advance GB-0895 through the completion of our two Phase 3 trials in severe asthma, (ii) complete our ongoing Phase 1b clinical trial of GB-0895 for the treatment of COPD and to initiate the next phase of clinical development (pending results from our Phase 1b trial in COPD and regulatory alignment), (iii) fund platform and technology innovation and engineer multiple programs and product candidates through development candidate nomination and into IND-enabling activities and (iv) advance GB-4362 and GB-5267 through topline Phase 1 data; and the remainder for additional research and development efforts for new programs and product candidates, as well as for working capital and other general corporate purposes. See the section titled "*Use of Proceeds*" for additional information.
Risk factors	See the section titled "*Risk Factors*" for a discussion of factors you should carefully consider before deciding whether to invest in our common stock.
Proposed trading symbol on The Nasdaq Stock Market	"GENB"

The number of shares of our common stock that will be outstanding after this offering is based on shares of our common stock (which includes shares of restricted common stock) outstanding as of December 31, 2025 after giving effect to the automatic conversion of all outstanding shares of our Series A convertible preferred stock, par value $0.001 per share (the "Series A preferred stock"), Series B convertible preferred stock, par value $0.001 per share (the "Series B preferred stock"), and Series C convertible preferred stock, par value $0.001 per share (the "Series C preferred stock" and, together with the Series A preferred stock and Series B preferred stock, the "preferred stock"), into an aggregate of shares of our common stock immediately prior to the completion of this offering, and excludes:

- shares of common stock issuable upon exercise of outstanding stock options as of December 31, 2025 under our 2019 Equity Incentive Plan, as amended (the "2019 Plan"), with a weighted average exercise price of $ per share;
- shares of common stock issuable upon exercise of outstanding stock options granted after December 31, 2025 under our 2019 Plan, with a weighted average exercise price of $ per share;
- shares of common stock reserved for future issuance as of December 31, 2025 under the 2019 Plan, which will cease to be available for issuance at the time that our 2026 Stock Option and Incentive Plan (the "2026 Plan") becomes effective;
- shares of our common stock issuable upon exercise of an outstanding warrant to purchase Series A preferred stock that will become a warrant to purchase common stock immediately prior to the completion of this offering, with an exercise price of $ per share;
- shares of our common stock reserved for future issuance under our 2026 Plan, which will become effective on the date immediately prior to the effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2026 Plan and any shares underlying outstanding stock awards granted under the 2019 Plan that expire or are repurchased, forfeited, cancelled or withheld; and
- shares of common stock reserved for future issuance under our 2026 Employee Stock Purchase Plan (the "ESPP"), which will become effective on the date immediately prior to the effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the ESPP.

Unless otherwise indicated, the information in this prospectus reflects or assumes the following:

- the automatic conversion of all outstanding shares of our preferred stock into an aggregate of shares of common stock immediately prior to the completion of this offering;
- the automatic adjustment of an outstanding warrant to purchase 150,000 shares of Series A preferred stock into a warrant to purchase shares of common stock, which will occur immediately prior to the completion of this offering;
- no exercise of the outstanding stock options or warrants described above after December 31, 2025;
- no exercise of the underwriters' option to purchase up to an additional shares of common stock in this offering; and
- the filing and effectiveness of our second amended and restated certificate of incorporation (the "amended and restated certificate of incorporation") immediately prior to the completion of this offering and the effectiveness of our amended and restated bylaws upon the effectiveness of the registration statement of which this prospectus forms a part.

SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables set forth our summary consolidated statements of operations for the years ended December 31, 2024 and 2025. Our audited consolidated financial statements included elsewhere in this prospectus have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). Our historical results are not necessarily indicative of the results that may be expected for any period in the future. You should read the following summary financial data together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited consolidated financial statements and the related notes included elsewhere in this prospectus. The summary consolidated financial data included in this section are not intended to replace the audited consolidated financial statements and are qualified in their entirety by our audited consolidated financial statements and the related notes included elsewhere in this prospectus.

	Year Ended December 31,	
	2024	2025
	(in thousands, except share and per share data)	
Statements of Operations and Comprehensive Loss Data:		
Collaboration revenue	$ 20,459	$
Operating expenses:		
Research and development	175,311	
General and administrative	42,087	
Total operating expenses	217,398	
Loss from operations	(196,939)	
Other income (expense), net:		
Change in fair value of preferred stock warranty liability	(154)	
Interest Expense	(2,118)	
Interest income	18,118	
Foreign currency exchange loss	(79)	
Total other income (expense) net	15,767	
Loss before provision for income tax	(181,172)	
Provision for Income taxes	(212)	
Net loss	(181,384)	
Net loss attributable to non-controlling interests	(7,613)	
Net loss attributable to Generate Biomedicines, Inc. stockholders	$ (173,771)	
Net loss attributable to Generate Biomedicines, Inc. common stockholders, basic and diluted(1)	$ (213,777)	
Net loss per share, basic and diluted(1)	$ (4.39)	
Weighted average shares of common stock outstanding, basic and diluted(1)	48,736,466	
Comprehensive loss:		
Net Loss	$ (181,384)	
Unrealized gain on marketable securities	69	
Comprehensive loss	(181,315)	
Comprehensive loss attributable to non-controlling interest	(7,613)	
Comprehensive loss attributable to Generate Biomedicines, Inc. stockholders	$ (173,702)	
Pro forma net loss per share, basic and diluted (unaudited)(2)		
Pro forma weighted average shares of common stock outstanding, basic and diluted (unaudited)(2)		

(1) See Note 2 and Note 8 to our audited consolidated financial statements included elsewhere in this prospectus for an explanation of the method used to calculate historical net loss attributable to common stockholders per share, basic and diluted, and the weighted-average number of shares of common stock used in the computation of the per share amounts.

(2) Pro forma basic and diluted net loss per share attributable to Generate Biomedicines, Inc. common stockholders has been prepared to give effect to adjustments to our capital structure arising in connection with the completion of this offering and is calculated by dividing the pro forma net loss attributable to Generate Biomedicines, Inc. common stockholders by the pro forma weighted average common shares outstanding for the period. Pro forma net loss attributable to common stockholders is computed by adjusting the Company's net loss to exclude net loss attributable to non-controlling interest, to include cumulative dividends on the Series B preferred stock and Series C preferred stock and reverse the fair value adjustment recorded on the liability classified warrants. Pro forma weighted average shares of common stock outstanding is computed by adjusting the weighted average shares of common stock outstanding to give pro forma effect to the conversion of all outstanding shares of our convertible preferred stock into shares of our common stock as if such conversion had occurred on January 1, 2025. Pro forma basic and diluted net loss per share attributable to common stockholders does not include the effect of the shares expected to be sold and related proceeds to be received in this offering.

	December 31, 2025		
	Actual	Pro Forma(1)	Pro Forma As Adjusted(2)
	(in thousands, except for share data)		
Balance Sheet Data:			
Cash, cash equivalents and marketable securities	$	$	$
Working capital(3)			
Total assets			
Total liabilities			
Convertible preferred stock		—	—
Common stock, par value $0.001 per share; shares authorized, shares issued and outstanding, actual; shares authorized, shares issued and outstanding, pro forma; shares authorized, shares issued and outstanding, pro forma as adjusted			
Additional paid-in capital			
Accumulated deficit			
Total stockholders' (deficit) equity			

(1) Pro forma amounts give effect to the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of shares of our common stock and the automatic adjustment of our preferred stock warrant into a common stock warrant immediately prior to the closing of this offering.

(2) Pro forma as adjusted amounts give effect to (i) the pro forma adjustments set forth in footnote (1) above and (ii) the issuance and sale of shares of our common stock in this offering at the initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each $1.00 increase or decrease in the assumed initial public offering price of $ per share would increase or decrease, as applicable, the pro forma as adjusted amount of each of our cash, cash equivalents and marketable securities, working capital, total assets and total stockholders' (deficit) equity by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase or decrease of 1.0 million shares in the number of shares offered by us at the assumed initial public offering price of $ per share would increase or decrease, as applicable, the pro forma as adjusted amounts of each of our cash, cash equivalents and marketable securities, working capital, total assets and total stockholders' (deficit) equity by approximately $, assuming no change in the assumed initial public offering price per share, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(3) We define working capital as current assets less current liabilities. See our audited consolidated financial statements and the related notes included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the following risks and uncertainties, together with all other information in this prospectus, including our consolidated financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations," before investing in our common stock. Any of the risk factors we describe below could adversely affect our business, financial condition or results of operations. The market price of our common stock could decline if one or more of these risks or uncertainties actually occur, causing you to lose all or part of the money you paid to buy our common stock. Additional risks that we currently do not know about or that we currently believe to be immaterial may also impair our business. Certain statements below are forward-looking statements. See the section titled "Special Note Regarding Forward-Looking Statements" appearing elsewhere in this prospectus.

Risks Related to Our Business, Financial Position and Capital Needs

We are a clinical-stage biotechnology company with a limited operating history and no products approved by regulators for commercial sale, which may make it difficult to evaluate our current and future business prospects.

Since our inception in 2018, we have focused substantially all of our efforts and financial resources on developing our Generate Platform and researching and developing programs and product candidates. All of our programs and product candidates are still in the research, preclinical development or clinical development stages. We have not yet demonstrated our ability to successfully complete Phase 3 or other pivotal clinical trials, obtain regulatory approvals, manufacture a commercial-scale product or arrange for a third-party to do so on our behalf, or conduct sales, marketing and distribution activities necessary for successful product commercialization. Additionally, we expect our financial condition and operating results to continue to fluctuate significantly from period to period due to a variety of factors, many of which are beyond our control. Consequently, any predictions made about our future success or viability may not be as accurate as they could be if we had a longer operating history.

We have no products approved for commercial sale and we can provide no assurance that we will obtain regulatory approvals to market and sell any products in the future. We therefore have never generated any revenue from product sales, and we do not expect to generate any revenue from product sales in the foreseeable future. Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. If we do not address these risks and difficulties successfully, our business will suffer.

Even if this offering is completed, we will require substantial additional capital to finance our operations in the future. If we are unable to raise such capital when needed, or on acceptable terms, we may be forced to delay, reduce or eliminate programs, product candidates (including clinical trials), investment in our Generate Platform, or future commercialization efforts.

Developing biopharmaceutical products, including conducting preclinical studies and clinical trials, is a time-consuming, expensive and uncertain process that takes years to complete. We expect to spend substantial amounts to (i) continue our research and development activities, perform preclinical studies, and conduct clinical trials of our current and future programs and product candidates, (ii) continue to develop our Generate Platform, (iii) seek regulatory approvals for our product candidates, including GB-0895 and (iv) launch and commercialize any product candidates for which we receive regulatory approval, including potentially building our own commercial sales, marketing and distribution organization.

As of December 31, 2025, we had approximately $ million in cash, cash equivalents, restricted cash and marketable securities. We estimate that the net proceeds from this offering will be approximately $ million, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover of this prospectus, after deducting estimated underwriting discounts and commissions and offering expenses payable by us. We expect that the net proceeds from this offering and our existing cash, cash equivalents, restricted cash and marketable securities will be sufficient to fund our current operations through at least the next twelve months. However, our operating plan may change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned, through public or private equity or debt financings, royalty financings, government or other third-party grants, asset sales, partnership, collaboration or licensing arrangements such as our collaborations with Amgen, Inc. ("Amgen") and

Novartis Pharma AG (“Novartis”), or a combination of these approaches. Even if we believe we have sufficient funds for our current or future operating plans, we may seek additional capital if market conditions are favorable or if we have specific strategic considerations. Our spending will vary based on new and ongoing research and development and corporate activities. Because the length of time and activities associated with research and development of our programs and product candidates are highly uncertain, we are unable to estimate the actual funds we will require for research, development, marketing and commercialization activities. Our future funding requirements, both near and long term, will depend on many factors, including, but not limited to the:

- number of programs that result in product candidates we chose develop further;
- initiation, progress, timing, costs and results of preclinical or nonclinical studies and clinical trials for our product candidates;
- resources required to further develop Generate Platform;
- clinical development plans we establish for these product candidates;
- terms of any agreements with our current or future collaboration partners;
- outcome, timing and cost of meeting regulatory requirements established by the U.S. Food and Drug Administration (the “FDA”), the Medicines and Healthcare products Regulatory Agency (the “MHRA”), the European Medicines Agency (the “EMA”), Pharmaceuticals and Medical Devices Agency and other comparable foreign regulatory authorities (collectively, the “Regulatory Authorities”);
- cost of filing, prosecuting, maintaining, defending and enforcing our patent claims and other intellectual property rights,
- effect of competing technological and market developments, including other products that may compete with one or more of our product candidates;
- cost and timing of completion and further expansion of clinical and commercial scale manufacturing activities sufficient to support all of our current and future product candidates; and
- cost of establishing sales, marketing and distribution capabilities for any product candidates for which we may receive marketing approval and reimbursement in regions where we choose to commercialize our products on our own.

To date, we have financed our operations primarily through private placements of our convertible preferred stock, the issuance of convertible notes, payments from Amgen and Novartis, and cost-sharing payments from other partnership, collaboration or licensing arrangements. In December 2021, we entered into a collaboration and license agreement with Amgen, as amended (as amended from time to time, the “Amgen Collaboration Agreement”), and, in connection therewith, we received a non-refundable upfront payment of $50.0 million in January 2022, an equity investment of $25.0 million in October 2023 from the sale to Amgen of our Series C preferred stock, an additional upfront payment of $5.0 million in December 2023 in connection with an amendment to the Amgen Collaboration Agreement, and a $5.0 million development milestone payment in August 2024. In September 2024, we entered into a collaboration and license agreement with Novartis (the “Novartis Collaboration Agreement”), and, in connection therewith, we received a non-refundable upfront payment of $50.0 million in October 2024 and an equity investment of $15.0 million from the sale of our Series C preferred stock. In addition, we have benefited from cost-sharing arrangements in our collaboration arrangements with The University of Texas M.D. Anderson Cancer Center (“MD Anderson”), Roswell Park Comprehensive Cancer Center ("Roswell Park") and Pioneering Medicines 02, Inc. (“PMCo”). We cannot be certain that additional funding will be available on favorable terms, or at all. Until we can generate sufficient product, milestone or royalty revenue to finance our operations, which we may never do, we expect to finance our future cash needs through a combination of public or private equity or debt financings, government or other third-party grants, asset sales, royalty financings, and partnership, collaboration or licensing arrangements. Any fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop our programs, develop and commercialize our product candidates or develop our Generate Platform. In addition, we cannot guarantee that future financing will be available in sufficient amounts, at the right time, on favorable terms or at all. Among other possibilities, negative clinical trial data or setbacks, or perceived setbacks, in our programs or product candidates, or with respect to our Generate Platform, could impair our ability to raise additional financing or grants, or our ability to enter into partnership, collaboration and licensing arrangements, in each case, on favorable terms, or at all. Moreover, the

terms of any equity or debt financing may adversely affect the holdings or the rights of our stockholders and the issuance of additional securities, or the possibility of such issuance, may cause the market price of our shares to decline. If we raise additional funds through public or private equity offerings, the terms of these securities may include liquidation or other preferences that may adversely affect our stockholders' rights.

Further, to the extent that we raise additional capital through the sale of common stock or securities convertible or exchangeable into common stock, your ownership interest will be diluted. If we raise additional capital through debt financing, we would be subject to fixed payment obligations and may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional capital from third-parties through public or private equity or debt financings, government or other third-party grants, asset sales, royalty financings, partnership, collaboration and licensing arrangements, or a combination of these approaches, we may have to relinquish certain valuable rights to our programs or product candidates, technologies or future revenue streams. We also could be required to seek collaboration partners for one or more of our current or future programs and product candidates at an earlier stage than otherwise would be desirable or relinquish our rights to programs and product candidates, or intellectual property that we otherwise would seek to develop or commercialize ourselves. If we are unable to raise additional capital in sufficient amounts, at the right time, on favorable terms, or at all, we may have to significantly delay, scale back or discontinue the development of one or more of our programs, or the development and commercialization of one or more of our product candidates, or one or more of our other research and development initiatives. Any of the above events could significantly harm our business, prospects, financial condition and results of operations, cause the price of our common stock to decline, and negatively impact our ability to fund operations.

We have incurred significant losses since our inception and anticipate that we will continue to incur significant losses for the foreseeable future.

We have no products approved for commercial sale and have not generated any revenue from product sales to date. We will continue to incur significant research and development and other expenses related to our programs, product candidates, Generate Platform, and ongoing operations. As a result, we are not profitable and have incurred losses in each period since our inception. Net losses and negative cash flows have had, and will continue to have, an adverse effect on our stockholders' equity (deficit) and working capital. We have incurred net losses in each year since our inception in 2018, including net losses of $ million and $173.8 million for the years ended December 31, 2025 and 2024, respectively. As of December 31, 2025, we had an accumulated deficit of $ million.

We have devoted most of our financial resources to research and development, including our clinical and preclinical development activities and the development of our Generate Platform. To date, we have financed our operations primarily through private placements of our convertible preferred stock, the issuance of convertible notes, payments from Amgen and Novartis, and cost-sharing payments from other partnership, collaboration or licensing arrangements. The amount of our future net losses will depend, in part, on the rate of our future expenditures and our ability to obtain funding through public or private equity or debt financings, government or other third-party grants, asset sales, royalty financings, partnership, collaboration and licensing arrangements, or a combination of these approaches. We have not completed pivotal clinical trials for any of our product candidates, and it will be several years, if ever, before we or our collaboration partners have a product candidate ready for commercialization. Even if we or our collaboration partners obtain regulatory approval to market a product, our future revenues will depend upon the size of any markets in which such product have received approval, and our ability to achieve sufficient market acceptance, reimbursement from third-party payors, and adequate market share in those markets. We may never achieve profitability.

We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. We anticipate that our expenses will increase substantially if and as we:

- expand the number of our research and development programs;
- continue or expand our scope of research or development of our current programs and product candidates in preclinical development;
- continue or expand the scope of our clinical trials for our product candidates;
- initiate additional preclinical, clinical or other studies or trials for our programs and product candidates, including pursuant to some of our partnership, collaboration and licensing arrangements;

- change or add additional manufacturers or suppliers;
- add additional infrastructure to our quality control and quality assurance groups to support our operations as we progress our product candidates toward commercialization;
- attract and retain skilled personnel;
- create additional infrastructure to support our operations as a public company and our product development and planned future commercialization efforts;
- seek marketing approvals and reimbursement for our product candidates and products;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- acquire or in-license technologies;
- make payments under any in-license agreements;
- maintain, protect and expand our intellectual property portfolio; and
- experience any delays or encounter issues with any of the above.

Biopharmaceutical product development entails substantial upfront capital expenditures and significant risk that any program or product candidate will fail to demonstrate adequate efficacy or an acceptable safety profile, gain regulatory approval, secure market access and reimbursement and become commercially viable, and therefore any investment in us is highly speculative. Accordingly, before making an investment in us, our prospects, factoring in the costs, uncertainties, delays and difficulties frequently encountered by companies in clinical development, especially clinical-stage biotechnology companies such as ours, should be carefully considered. Any predictions about our future success or viability may not be as accurate as they would otherwise be if we had a longer operating history or a history of successfully developing and commercializing biopharmaceutical products. We may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives.

The development of our programs and the development and potential commercialization of our product candidates will require substantial additional capital to fund expenses. We have entered into collaboration agreements for certain programs and product candidates and may decide to collaborate for the future development and potential commercialization of other product candidates. For example, we are party to cost-sharing arrangements in our collaboration arrangements with MD Anderson and Roswell Park, pursuant to which we will collaborate to jointly discover and co-develop protein therapeutics. However, we cannot guarantee that either we or our collaboration partners will have the available funds to fund the research and development activities contemplated by such agreements. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our programs and product candidates or bring them to market and generate product revenue.

Additionally, our expenses could increase beyond our expectations if we are required by the Regulatory Authorities to perform clinical trials in addition to those that we currently expect, or if there are any delays in the development of GB-0895 and our other product candidates such as delays in establishing appropriate manufacturing arrangements or delays in completing clinical trials.

Our management and our independent registered public accounting firm have concluded that there is substantial doubt as to our ability to continue as a going concern. If we cannot continue as a going concern, our stockholders may lose some or all of their investment in our company.

Our audited consolidated financial statements, included elsewhere in this prospectus, were prepared assuming that we will continue as a going concern. The going concern basis of presentation assumes that we will continue in operation for the foreseeable future and will be able to realize our assets and satisfy our liabilities in the normal course of business and do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or amounts and classification of liabilities that may result from our inability to continue as a going concern. As of December 31, 2025 and 2024, we had cash and cash equivalents and marketable securities of $ million and $393.6 million, respectively. We have incurred recurring losses since inception, including a

net loss attributable to Generate Biomedicines, Inc. common stockholders of $ million for the year ended December 31, 2025. As of December 31, 2025 and 2024, we had an accumulated deficit of $ million and $473.1 million, respectively. Based on our current capital resources, which consists of cash, cash equivalents and marketable securities on hand at December 31, 2025, we will not have sufficient cash on hand to support current operations for at least twelve months from January , 2026, the date of issuance of the financial statements. This condition raises substantial doubt about our ability to continue as a going concern.

Additionally, if we are unable to obtain funding, through equity financings, debt financings or other capital sources, we could be forced to delay, reduce or eliminate some or all of our programs, product candidates, development of our Generate Platform, or commercialization efforts. Any such actions could adversely affect our business prospects, or our ability to continue as a going concern. There is no assurance that we will be successful in obtaining sufficient funding on terms acceptable to fund continuing operations, if at all. Even if we are able to raise additional capital, there is no guarantee the proceeds would be sufficient to support our operating plans for at least the next twelve months from the date of issuance of these financial statements. If we cannot continue as a going concern, we may have to liquidate our assets and may receive less than the value at which those assets are carried on our combined financial statements, and it is likely that our stockholders may lose some or all of their investment in us.

We are dependent on the success of our product candidates, including GB-0895, GB-4362 and GB-5267, and our ongoing and anticipated trials may not be successful.

Our future success is dependent on our ability to timely obtain marketing approval for, and then successfully commercialize, our product candidates, including GB-0895, GB-4362 and GB-5267. We are investing a majority of our financial resources into the research and development of these product candidates including our clinical trials for GB-0895 and planned clinical trials for GB-4362 and GB-5267, for which Investigational New Drug applications ("INDs") were submitted in early December 2025.

Our product candidates will require additional clinical development, evaluation of clinical, preclinical and manufacturing activities, marketing approval in multiple jurisdictions, substantial investment and significant marketing efforts before we generate any revenues from product sales. We are not permitted to market or promote these product candidates, or any other product candidates, before we receive marketing approval from the applicable Regulatory Authorities, and we may never receive such marketing approvals.

The success of our product candidates will depend on a variety of factors. We do not have control over many of these factors, including certain aspects of clinical development and the regulatory submission and review process, potential threats to our intellectual property rights and our manufacturing, marketing, distribution and sales efforts of those of any current or future collaborator. In addition, we do not have control over whether products that target the same indications as our product candidates are introduced, which could impact the competitiveness of our product candidates. Accordingly, we cannot assure you that we will ever be able to generate revenue through the sale of these product candidates, even if approved. If we are not successful in commercializing GB-0895, GB-4362 or GB-5267, or any other product candidate, or are significantly delayed in doing so, our business will be materially harmed.

If we do not achieve our projected development goals in the time frames we announce and expect, the commercialization of our product candidates may be delayed and, as a result, our stock price may decline.

From time to time, we estimate the timing of the anticipated accomplishment of various scientific, clinical, regulatory and other product development goals, which we sometimes refer to as milestones. These milestones may include the commencement or completion of scientific studies and clinical trials, the submission of regulatory filings or commercialization objectives, such as the expected timing for the topline data from our Phase 3 clinical trials of GB-0895 for the treatment of severe asthma or Phase 1b clinical trial of GB-0895 in moderate-to-severe chronic obstructive pulmonary disease ("COPD"). From time to time, we may publicly announce the expected timing of some of these milestones. All of these milestones are based on a variety of assumptions which, if not realized as expected, may cause the timing of achievement of the milestones to vary considerably from our estimates, in some cases for reasons beyond our control, including:

- our available capital resources or capital constraints we experience;

- the rate of progress, costs and results of our clinical trials and research and development activities, including the extent of scheduling conflicts with participating clinicians and collaborators;
- our substantial reliance on third-party contract research organizations ("CROs") to engage, qualify and prepare clinical trial sites, complete these trials successfully, in compliance with regulatory requirements, and on schedule;
- our ability to identify and enroll patients who meet clinical trial eligibility criteria;
- our receipt of approvals by the Regulatory Authorities and the timing thereof;
- other actions, decisions or rules issued by regulators;
- our substantial reliance on third-party contract development and manufacturing organizations ("CDMOs") to manufacture our product candidates;
- our CDMOs access to sufficient, reliable and affordable supplies of materials used to manufacture our product candidates;
- the efforts of our collaborators with respect to the manufacturing and commercialization of our product candidates;
- the ability to commercialize our product candidates; and
- the securing of, costs related to, and timing issues associated with, product manufacturing as well as sales and marketing activities.

Any inability to meet milestones as publicly announced, or at all, may delay the commercialization of our product candidates or commercialization may never be achieved and, as a result, our stock price may decline. Additionally, delays relative to our projected timelines are likely to cause overall expenses to increase, which may require us to raise additional capital sooner than expected and prior to achieving targeted development milestones, and may decrease the attractiveness of our product candidates relative to competitive products expected to be approved by the applicable Regulatory Authorities prior to our product candidates.

Our quarterly and annual operating results may fluctuate in the future. As a result, we may fail to meet or exceed the expectations of research analysts or investors, which could cause our stock price to decline and negatively impact our financing or funding ability as well as negatively impact our ability to exist as a standalone company.

Our financial condition and operating results have varied in the past and will continue to fluctuate from quarter-to-quarter and year-to-year in the future due to a variety of factors, many of which are beyond our control. Factors relating to our business that may contribute to these fluctuations include the following, as well as other factors described elsewhere in this prospectus:

- inability to develop promising programs;
- delays or failures in advancement of existing or future product candidates into the clinic or in clinical trials;
- the feasibility of developing, manufacturing and commercializing our product candidates;
- our ability to manage our growth;

- the outcomes of research programs, clinical trials or other product development or approval processes conducted by us and our collaboration partners;
- our ability to develop or successfully commercialize product candidates;
- the ability of our collaboration partners to develop and successfully commercialize product candidates;
- our relationships, and any associated exclusivity terms, with collaboration partners, including Amgen, Novartis and PMCo;
- our contractual or other obligations to provide resources to fund our programs and product candidates;
- our operation in a net loss position for the foreseeable future;
- risks associated with the international aspects of our business, including manufacturing of our product candidates, the conduct of clinical trials in multiple international locations and potential commercialization in such locations; our ability to consistently arrange for manufacture of our product candidates by third-parties;
- our ability to accurately report our financial results in a timely manner; our dependence on, and the need to attract and retain, key management and other personnel;
- our ability to obtain, protect, maintain and enforce our intellectual property ("IP") rights; our ability to prevent the theft or misappropriation of our IP and know-how or proprietary technologies; potential advantages that our competitors and potential competitors may have in securing funding, obtaining and maintaining the rights to critical IP or developing competing technologies or products;
- our ability to obtain additional capital that may be necessary to expand our business; our collaboration partners' ability to obtain additional capital that may be necessary to develop programs and develop and commercialize product candidates pursuant to our partnership, collaboration and licensing arrangements;
- the effect of changes in government regulation;
- cybersecurity breaches and other business interruptions such as power outages, strikes, acts of terrorism or natural disasters; and
- our ability to use our net operating loss ("NOL") carryforwards to offset future taxable income.

Risks Related to Our Generate Platform and Our Use of Artificial Intelligence

Our approach to the engineering and development of our programs is unproven, and we may not be successful in our efforts to identify and develop any programs and product candidates of commercial value by leveraging our Generate Platform.

The Generate Platform and our approach to drug engineering and development utilizes, among other things, our proprietary artificial intelligence and machine learning ("AI") solutions to create a pipeline of product candidates. Because our approach is both proprietary and pioneering, the cost and time needed to develop our programs and product candidates can be difficult to predict, and our efforts may not result in the engineering and development of commercially viable human therapeutics.

Any drug engineering and development that we are conducting with our Generate Platform may not be successful in identifying programs and product candidates that have commercial value or therapeutic utility. The Generate Platform may initially show promise in identifying potential programs and product candidates, yet fail to yield viable programs and product candidates for clinical development or potential commercialization for a number of reasons, including:

- research programs to identify new programs and product candidates will require substantial technical, financial and human resources, and we may be unsuccessful in our efforts to identify new programs and product candidates. If we are unable to identify suitable additional compounds for preclinical and clinical development, our ability to develop programs and product candidates and obtain product revenues in future periods could be

compromised, which could result in significant harm to our financial position and adversely impact our stock price;

- programs and product candidates engineered with our Generate Platform may not demonstrate efficacy, safety or tolerability, including because they may demonstrate different chemical and pharmacological properties in patients than they do in laboratory studies, or otherwise may interact with human biological systems in unforeseen, ineffective or possibly harmful ways;
- programs and product candidates may, on further study, be shown to have harmful side effects or other characteristics that indicate that they are unlikely to receive marketing approval and achieve market acceptance;
- competitors may develop alternative therapies that render our programs and product candidates non-competitive or less attractive; or
- a potential product candidate may not be capable of being produced at an acceptable cost.

In addition, we may in the future seek to identify and develop programs and engineer and develop product candidates that are based on novel targets and technologies that are unproven. If our activities fail to identify novel targets or technologies for drug engineering and development, or such targets prove to be unsuitable for treating human disease, we may not be able to develop viable additional programs and product candidates. We and our existing or future collaborators may never receive approval to market and commercialize any product candidate. Even if we or an existing or future collaborator obtains regulatory approval, the approval may be for targets, disease indications or patient populations that are not as broad as we intended or desired or may require labeling that includes significant use or distribution restrictions or safety warnings. If the product candidates resulting from our programs prove to be ineffective, unsafe or commercially unviable, our programs and product candidates would have little, if any, value, which would have a material and adverse effect on our business, financial condition, results of operations and prospects.

We are substantially dependent on the successful application of our Generate Platform to develop programs and product candidates that can be commercialized by us or our current or future collaboration partners.

Since our formation, we have focused on investing in our Generate Platform to unlock a new way of developing programs and product candidates for development and, if approved, potential commercialization by us and our collaboration partners. The biotechnology industry is capital intensive, and our success depends significantly on our ability to apply our Generate Platform to develop programs and engineer and develop product candidates that can be further developed by us or our current or future collaboration partners. Our ability to engineer and develop product candidates and increase revenue depends in large part on our ability to continue to enhance and improve our Generate Platform. We have invested, and expect to continue to invest, in research and development efforts, acquisitions and licensing agreements that further enhance our Generate Platform. These investments may involve significant time, risks and uncertainties, including the risks that any new software or hardware enhancement or the integration of software or hardware from an acquired company or third-party licensor may not be introduced in a timely or cost-effective manner; may not keep pace with technological developments; or may not achieve the functionality necessary to generate significant revenues. The success of any enhancement to our Generate Platform depends on several factors, including (i) the development of more advanced models and algorithms; (ii) the generation of additional high quality and relevant data; (iii) high quality and high-throughput biohardware, including laboratory analysis and structural solutions from our cryogenic electron microscopy (“Cryo-EM”) core; (iv) innovation in other experimental, computational and/or infrastructure technologies; and (v) increased computational storage and processing capacity.

The Generate Platform depends upon the continuous, effective and reliable operation of our biohardware, including our laboratory systems, Cryo-EM core and AI solutions, including software, hardware, databases and related tools and functions, as well as the integrity of our data. We have from time to time found defects, vulnerabilities or other errors in such tools, functions and data, and new errors may be detected in the future. The risk of errors is particularly significant when new software code or hardware is first introduced or when new versions or enhancements of existing software code or hardware are implemented. Errors may also result from the interface of our proprietary software and hardware tools with our data or with third-party systems and data.

Further, the price of new equipment and hardware, including graphics processing units (“GPUs”), is subject to market fluctuations. Such fluctuations are influenced by factors, including supply and demand for such equipment. In the case of GPUs for AI services, current demand for certain types of GPUs and networking equipment far exceeds supply, impacting the price and availability of such

hardware. As a result, the cost of new equipment has been and may in the future be unpredictable, and may also be significantly higher than our historical costs.

If we are unable to successfully enhance our Generate Platform, or if there are any defects or disruptions in our Generate Platform that are not timely resolved, our ability to develop new innovations and ultimately gain market acceptance of our products and our Generate Platform, could be materially and adversely impacted, and our reputation, business, operating results and prospects could be materially harmed.

We have limited clinical data on product candidates that were computationally engineered with our Generate Platform demonstrating whether they are safe or effective for long-term treatment in humans. The long-term safety and efficacy of product candidates computationally engineered with our Generate Platform is unknown. Our approach may not result in time savings, higher success rates or reduced costs as we expect it to, and if not, we may not attract collaborators or develop new product candidates as quickly or cost effectively as expected and we therefore may not be able to execute on our strategic approach as originally expected.

Product candidates engineered with our Generate Platform require substantial technical, financial and human resources to develop and potentially commercialize. We may not be able to maintain sufficient resources and expertise to discover additional programs and product candidates. If we are unable to identify successful programs and product candidates for preclinical and clinical development and regulatory approval in a timely matter or at all, we could experience significant delays or an inability to successfully pursue strategic alternatives, including identifying and consummating transactions with third-party partners, to further develop, obtain marketing approval for and/or commercialize our product candidates, which could harm our business.

Issues relating to our use of AI in the identification of our programs and the engineering and development of our product candidates could adversely affect our business and operating results.

We incorporate AI solutions, among other technologies and capabilities, into our Generate Platform. There are risks involved in utilizing AI, including that AI-generated content, analyses, or recommendations we utilize could be deficient, that our competitors may more quickly or effectively adopt AI capabilities, or that our use of AI or other emerging technologies increases regulatory, cybersecurity and other significant risks. If our AI systems fail to achieve their intended purposes – such as identifying viable therapeutic candidates or targets, predicting biological outcomes, producing reproducible results, and other similar or related purposes – our product development efforts may be delayed or unsuccessful. If we are unable to successfully integrate and manage AI within our business, or if AI fails to deliver the expected benefits, our ability to develop our programs and product candidates could be materially adversely affected.

Issues relating to the use of new and evolving technologies such as AI may cause us to experience brand or reputational harm, competitive harm, legal liability and new or enhanced governmental or regulatory scrutiny, and we may incur additional costs to resolve such issues. Known risks of AI generally include inaccuracy, hallucinations, bias, intellectual property infringement or misappropriation, data privacy and cybersecurity issues and data provenance disputes. Perceived or actual technical, legal, compliance, privacy, security, ethical or other issues relating to the use of AI in biopharmaceutical development may cause public confidence in AI to be undermined, which could slow market acceptance of product candidates discovered and developed using AI. In addition, litigation or government regulation related to the use of AI may also adversely impact our ability to identify programs and engineer and develop product candidates using AI, as well as increase the cost and complexity of doing so. For example, regulators may limit our ability to develop or implement our proprietary AI models and algorithms and/or may eliminate or restrict the confidentiality of our proprietary technology, or may limit our ability to secure intellectual property rights to technologies created with the assistance of our proprietary AI models and algorithms, which could have an adverse effect on our business, results of operations and financial condition.

We also face increased competition from other companies that claim to use AI and related methods for drug engineering and development, some of which have more resources than we do and may have developed more effective methods than we and any third-party collaborators have, which may reduce our and any third-party collaborators' effectiveness in identifying potential product candidates and attracting additional collaborators to work with us. In particular, biotechnology companies based in China present both known and emerging competitive threats to our business. Many of these companies operate within innovation ecosystems characterized by substantial government investment, access to large and rapidly expanding biological and clinical datasets, and

accelerated regulatory or funding pathways. These factors may allow Chinese biotechnology companies to develop, train and deploy advanced computational models, drug discovery platforms or biologic design technologies more rapidly or at lower cost than we can. If our competitors are able to utilize new technologies more effectively (including but not limited to those that may involve AI or be created using AI) to discover, develop and commercialize products that compete with any of our programs and product candidates, such technologies could adversely impact our ability to compete.

Further, AI may have or produce errors or inadequacies that are not easily detectable. The quality of AI outputs depends heavily on the quality and quantity of input data. If the data used to train AI or the content, analyses or recommendations that AI applications assist in producing are or are alleged to be deficient, inaccurate, incomplete, hallucinatory, overbroad or biased, our business, financial condition and results of operations may be adversely affected. Developing, testing and deploying AI systems may also increase the cost profile of our product offerings due to the nature of the computing costs involved in such systems, which could impact our project margin and adversely affect our business and operating results.

The legal landscape and subsequent legal protection for the use of AI remains uncertain, and the increasing use of AI in drug discovery and development introduces new and evolving risks related to ownership, inventorship and protection of intellectual property generated by or with the assistance of AI technologies. For example, generative AI may be used improperly or inappropriately, which could lead to the tainting of our proprietary information and render us unable to qualify for certain patent or trade secret protection. Moreover, if our vendors, employees, suppliers or contractors with access to our proprietary and confidential information and know-how were to disclose such information as inputs to third-party AI tools this could lead to loss of trade secret protection and otherwise impact our ability to realize the benefit of our intellectual property. If we do not have sufficient rights to collect or use the data on which our AI relies or to the outputs produced by our Generate Platform, we may incur liability through the alleged violation of certain laws, third-party privacy rights, online terms of service or other contracts to which we or our data providers are a party. In addition, we rely on third-party software and hardware for our Generate Platform. If the relevant software or hardware, or updates to such software or hardware, were to become unavailable to us in the future on reasonable commercial terms, or if they became the subject of allegations of intellectual property infringement, our ability to continue to use our Generate Platform could be affected. We also rely on public sources of data, such as the Protein Data Bank, which, if they became unavailable to us on reasonable terms, could affect our Generate Platform. Regulatory and legal frameworks governing inventions created with or using AI are still developing and may create uncertainty regarding our ability to secure and enforce rights in such inventions.

AI presents risks and challenges that can impact our business including by posing security risks to our confidential information, proprietary information, and personal data.

Issues in the development and use of AI, combined with an uncertain regulatory environment, may result in reputational harm, liability or other adverse consequences to our business operations. As with many technological innovations, AI presents risks and challenges that could impact our business. In addition to our Generate Platform, we have adopted and integrated, and in the future may adopt and integrate additional generative AI tools into our systems for specific use cases reviewed by our legal department and information technology department. Our vendors may incorporate generative AI tools into their offerings without disclosing this use to us, and the providers of these generative AI tools may not meet existing or rapidly evolving regulatory or industry standards with respect to privacy and data protection and may inhibit our or our vendors' ability to maintain an adequate level of service and experience. If we, our vendors or our third-party partners experience an actual or perceived breach or privacy or security incident because of the use of generative AI, we may lose valuable intellectual property and confidential information and our reputation and the public perception of the effectiveness of our security measures could be harmed. Further, bad actors around the world use increasingly sophisticated methods, including the use of AI, to engage in illegal activities involving the theft and misuse of personal information, confidential information and intellectual property. Any of these outcomes could damage our reputation, result in the loss of valuable property and information, and adversely impact our business.

Our use of AI may also lead to novel and urgent cybersecurity and privacy risks, which may adversely affect our operations and reputation, as well as the operations of any third-party collaborators. Emerging ethical issues surround the use of AI, and we may be subject to reputational and legal risk if our deployment or use of AI becomes controversial. Our use of AI may also, in the future, result in cybersecurity incidents that implicate personal data of customers or patients. Any such cybersecurity incidents related to our use of AI could adversely affect our reputation and results of operations.

A growing number of federal, state, and international legislators, agencies and regulators are adopting laws and regulations and have focused enforcement efforts on the adoption of AI, and use of such technologies in compliance with ethical standards and societal expectations. These developments may increase our compliance burden and costs in connection with use of AI and lead to legal liability if we fail to meet evolving legal standards or if use of such technologies results in harms or other causes of action we did not predict. For example, the EU's Artificial Intelligence Act ("AI Act") entered into force on August 1, 2024, with most provisions becoming effective on August 2, 2026. This legislation imposes significant obligations on providers and deployers of AI systems and encourages providers and deployers of artificial intelligence systems to account for EU ethical principles in their development and use of these systems. The recently enacted United States Department of Justice Data Security Program (also known as the Bulk Data Transfer Rules), effective April 8, 2025, imposes complex additional restrictions on international data transfers, which may affect our ability to do business in manufacturing and clinical research in foreign countries. Likewise, in the U.S., several states, including Colorado and California, passed laws to regulate various AI uses, including AI used to make consequential decisions. In addition, various federal regulators have issued guidance and focused enforcement efforts on the use of AI in regulated sectors. The FDA, for example, issued draft guidance on the use of AI in regulatory decision-making for drug and biological products that centers on the context of use while establishing a credibility assessment framework for establishing and evaluating AI model outputs intended to support regulatory decision-making. If we develop or use AI systems governed by these laws or regulations, including as informed by regulatory guidance, we would need to meet higher standards of data quality, transparency, monitoring and human oversight, and we would need to adhere to specific and potentially burdensome and costly ethical, accountability and administrative requirements, with the potential for significant enforcement or litigation in the event of any perceived non-compliance. We expect other jurisdictions will adopt similar laws. Uncertainty in the legal regulatory regime may require significant resources to modify and maintain business practices to comply with U.S. and non-U.S. laws, the nature of which cannot be determined at this time. The scope of requirements depends on legal and risk determinations that rely on novel legal provisions that have not yet been interpreted by courts or regulators, and non-compliance can lead to significant fines or significant restrictions on our ability to conduct our business activities.

We utilize third-party open-source software ("OSS"), which presents risks that could adversely affect our business and subject us to possible litigation.

We utilize software that is licensed from third-parties under open-source licenses, and we expect to continue to use such OSS in the future. We cannot ensure that we have effectively monitored our use of OSS, validated the quality or source of such software, or are in compliance with the terms of the applicable open-source licenses or our policies and procedures. Use of OSS may entail greater risks than use of third-party commercial software because open-source licensors generally do not provide support, updates or warranties or other contractual protections regarding infringement claims or the quality of the code. OSS may also be more susceptible to security vulnerabilities. The availability of OSS could be adversely affected by service outages, data loss, privacy breaches, cyber-attacks and other events relating to the availability of these applications and services they provide, which could diminish the utility of these services and harm our business. We also could be subject to lawsuits by third-parties alleging that what we believe to be licensed OSS infringes such parties' intellectual property rights, which could be costly for us to defend and require us to devote additional research and development resources to change our solutions. Some OSS licenses contain requirements that we make available source code for modifications or derivative works we create based upon the type of OSS we use. If we combine our proprietary software with OSS in a certain manner, we could, under certain of the OSS licenses, be required to release the source code of our proprietary software to the public. This could allow our competitors to create similar products with lower development effort and time, and ultimately could result in a loss of product sales for us. Although we monitor our use of OSS, the terms of many OSS licenses have not been interpreted by U.S. courts, and there is a risk that those licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our product candidates. We could be required to seek licenses from third-parties in order to continue using our software, to re-engineer our software or to discontinue use of our software in the event re-engineering cannot be accomplished on a timely basis, any of which could materially and adversely affect our business, financial condition, results of operations and prospects.

Risks Related to the Research, Development, Regulatory Review and Approval of Our Product Candidates

Preclinical and clinical development is inherently lengthy and uncertain. Preclinical and clinical trials of our product candidates may be delayed, and certain programs may never advance in the clinic or may be more costly to conduct than we anticipate, any of which would have a material adverse impact on our Generate Platform or our business.

Preclinical and clinical testing is expensive and complex and can take many years to complete, and its outcome is inherently uncertain. We and our collaboration partners may not be able to initiate, may experience delays in or may have to discontinue preclinical studies and clinical trials for our product candidates.

Before we can initiate clinical trials for a product candidate, we must first complete extensive preclinical studies, including IND-enabling good laboratory practices ("GLP") toxicology testing, which support our planned INDs in the United States, or similar applications in other jurisdictions. We cannot be certain of the timely completion or outcome of our preclinical testing and studies. For example, while regulators like the FDA have signaled through draft guidance a movement away from animal testing for monoclonal antibodies, we have thus far depended on the availability of non-human primates ("NHPs") to conduct certain preclinical studies that we are required to complete prior to submitting an IND or foreign equivalent prior to initiating clinical development, and prior to submitting a marketing application. During the past several years, there was a global shortage of NHPs available for drug development. If the shortages in NHPs or other laboratory animals occur in the future, this could significantly increase the costs of obtaining, or decrease the availability of, NHPs or other laboratory animals for our future preclinical studies if regulators continue to require NHP data, or we require other laboratory animals, to support our preclinical and clinical development programs. This could also result in delays in our development and approval timelines.

We must also complete extensive work on Chemistry, Manufacturing and Controls ("CMC") activities (including yield, purity and stability data) to be included in the IND filing. CMC activities require extensive manufacturing processes and analytical development, which is uncertain and lengthy. For instance, batch failures as we scale up our manufacturing may occur. In addition, we may have difficulty identifying appropriate buffers and storage conditions to enable sufficient shelf life of batches of our preclinical or clinical product candidates. If we are required to produce new batches of our product candidates due to insufficient shelf life, it may delay the commencement or completion of preclinical or clinical trials of such product candidates.

We cannot predict if the Regulatory Authorities will accept the results of our preclinical testing or our proposed clinical programs or if the outcome of our preclinical testing, studies and CMC activities will ultimately support the further development of our programs. As a result, we cannot be sure that we will be able to submit INDs or similar applications for our preclinical programs on the timelines we expect, if at all, and we cannot be sure that submission of INDs or similar applications will result in the Regulatory Authorities allowing clinical trials to begin.

Our failure to successfully initiate and complete clinical trials and to demonstrate the efficacy and safety necessary to obtain regulatory approval to market our product candidates would also significantly harm our business. Our development costs will also increase if we experience delays in testing or regulatory approvals, and we may be required to obtain additional funds to complete clinical trials. There can be no assurance that our clinical trials will begin as planned or be completed on schedule, if at all, or that we will not need to restructure or otherwise modify our trials after they have begun. Regulatory Authorities may require us to submit additional data, such as long-term toxicology studies, or impose other requirements before permitting us to initiate a clinical trial.

We and our collaboration partners also may experience numerous unforeseen events during, or as a result of, any clinical trials that we or our collaboration partners conduct that could delay or prevent us or our collaboration partners from successfully developing our product candidates, including:

- the Regulatory Authorities, institutional review boards ("IRBs") or ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site for any number of reasons, including concerns regarding safety and aspects of the clinical trial design;

- we may experience delays in reaching, or fail to reach, agreement on favorable terms with prospective trial sites and prospective CROs, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- we may experience challenges in manufacturing sufficient quantities of our product candidates, or obtaining sufficient quantities of combination therapies for use in clinical trials;
- we may experience challenges or delays in recruiting principal investigators or study sites to lead our clinical trials;
- the number of subjects or patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be insufficient or slower than we anticipate, and the number of clinical trials being conducted at any given time may be high and result in fewer available patients for any given clinical trial, or patients may drop out of these clinical trials at a higher rate than we anticipate;
- we may experience limitations or shortages in our ability to obtain or supply necessary medical equipment to conduct clinical trials; for example, there are current supply constraints on the ability to obtain certain volumes of equipment for testing airway inflammation measures;
- we may continue to optimize our manufacturing processes, including through changes to the scale and site of manufacturing, which may lead to potentially significant changes in our clinical trial designs, requiring additional cost and time, and, as a consequence, lead to a delay in plans for progressing one or more product candidates;
- the outcome of our preclinical studies and our early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results;
- we may be unable to establish clinical endpoints that applicable regulatory authorities would consider clinically meaningful;
- we may have to amend clinical trial protocols submitted to regulatory authorities or conduct additional studies or add additional cohorts to reflect changes in regulatory requirements or guidance, which may be required to resubmit to an IRB, ethics committee and regulatory authorities for re-examination;
- in an effort to optimize product features, we plan to make in the future changes to our product candidates after we commence clinical trials, which may require us to repeat earlier stages of clinical testing or delay later stage testing of the product candidate;
- clinical trials of any product candidates may fail to show safety or efficacy, or produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional nonclinical studies or clinical trials, or we may decide to abandon development programs;
- our third-party contractors, including those manufacturing our product candidates or conducting clinical trials on our behalf, may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- differences in clinical trial design between early-stage clinical trials and later-stage clinical trials may make it difficult to extrapolate the results of earlier clinical trials to later clinical trials; preclinical and clinical data are often susceptible to varying interpretations and analyses, and many product candidates believed to have performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval;
- regulators or other reviewing bodies may find deficiencies with, fail to approve or subsequently find fault with the manufacturing processes or facilities of our CDMOs, or the supply or quality of any product candidate or other materials necessary to conduct clinical trials of our product candidates may be insufficient, inadequate or not available at an acceptable cost, or we may experience interruptions in supply;

- product candidates may have undesirable side effects or degradation products, any of which could lead to serious adverse events ("SAEs") or other unexpected characteristics;
- occurrence of SAEs in trials of the same class of product candidates conducted by other companies that could be considered similar to our product candidates; and
- the potential for approval policies or regulations of the Regulatory Authorities to significantly change in a manner rendering our clinical data insufficient for approval.

For example, we are developing a biologic-device combination for the administration of GB-0895 with an autoinjector and pre-filled syringe ("PFS") for ease of administration. Earlier clinical trials have used a syringe and vial presentation, and we intend to transition to the PFS presentation for our pivotal Phase 3 trials in severe asthma via protocol and regulatory amendments. Regulatory Authorities may require us to conduct, among other things, PK compatibility studies to bridge the vial and syringe presentation to these new planned devices and human factors testing to support self-administration of these devices. There is no assurance that we will be successful in demonstrating the safety of either of these biologic-device combinations in clinical trials, any other studies or at all, and any such failure would impede our development and commercialization strategy for GB-0895. In addition, Regulatory Authorities could require additional preclinical studies or clinical trials to support introduction of a biologic-device combination, which could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase our clinical trial costs, delay marketing approval of GB-0895 and jeopardize our ability to commence product sales and generate revenue from GB-0895, if approved.

We could also encounter delays if a clinical trial is suspended or terminated by us, the Regulatory Authorities, ethics committees or the IRBs of the institutions in which such trials are being conducted, or if such trial is recommended for suspension or termination by the Data Safety Monitoring Board ("DSMB") for such trial. We may experience delays in gaining clearance from Regulatory Authorities to initiate clinical trials through the imposition of a clinical hold in order to address comments from such regulators on our clinical trial design or other elements of our clinical trials. A suspension or termination may be imposed due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the Regulatory Authorities, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit or adequate benefit risk ratio from using a product candidate, failure to establish or achieve clinically meaningful trial endpoints, changes in governmental regulations or administrative actions, or lack of adequate funding to continue the clinical trial. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

Further, conducting clinical trials in foreign countries, as we intend to do for GB-0895 and as we may in the future conduct for our product candidates, presents additional risks that may delay completion of our clinical trials. These risks include the failure of enrolled subjects in foreign countries to adhere to clinical protocols as a result of differences in healthcare services or cultural customs, managing additional administrative burdens associated with foreign regulatory schemes, and political and economic risks, including war, relevant to such foreign countries.

Moreover, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive compensation in connection with such services. Under certain circumstances, we may be required to report some of these relationships to Regulatory Authorities. The Regulatory Authority may conclude that a financial relationship between us and a principal investigator has created a conflict of interest or otherwise affected interpretation of the study. The Regulatory Authority may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in a delay in approval, or rejection, of our marketing applications by the Regulatory Authority, as the case may be, and may ultimately lead to the denial of regulatory approval of one or more of our product candidates.

Significant clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize GB-0895 or any other product candidates or allow our competitors to bring products to market before we do and impair our ability to successfully commercialize our product candidates, which may harm our business, financial condition, results of operations and growth prospects. In addition, many of the factors that cause, or lead to, delays of clinical trials may ultimately lead to the denial of regulatory approval of our product candidates. Any delays in the development of our product candidates may harm our business, financial condition and prospects significantly.

We are currently enrolling patients in clinical trials for GB-0895 globally and may in the future conduct clinical trials for other product candidates outside the United States, and the Regulatory Authorities may not accept data from such trials.

We are currently enrolling patients in two global Phase 3 clinical trials for GB-0895 in patients with severe asthma across more than 40 countries in North America, Europe, Latin America and Asia Pacific, and we expect to continue to conduct trials for our current and future product candidates internationally in the future. The acceptance of data from clinical trials conducted outside the United States or another jurisdiction by the Regulatory Authorities may be subject to certain conditions or may not be accepted at all. In cases where data from foreign clinical trials are intended to serve as the basis for marketing approval in the United States, regardless of whether such trials were conducted under an IND, the FDA will generally not approve the application on the basis of foreign data alone unless the data are applicable to the U.S. population and U.S. medical practice, the trials were performed by clinical investigators of recognized competence and pursuant to Good Clinical Practice ("GCP") regulations, and the FDA can validate the data through on-site inspections or other appropriate means. Many foreign regulatory authorities have similar approval requirements, including in relation to the use of data from clinical trials conducted in foreign jurisdictions. In addition, such foreign trials are subject to the applicable local laws of the foreign jurisdictions where the trials are conducted. There can be no assurance that the Regulatory Authorities will accept data from trials conducted outside of the United States or the applicable jurisdiction. If the Regulatory Authorities do not accept such data, it would result in the need for additional trials, which could be costly and time-consuming, and which may result in any product candidates that we develop being delayed or not receiving approval for commercialization in the applicable jurisdiction. Additionally, recent policy proposals in the United States may make acceptance by the FDA or inclusion in a marketing application of foreign data more difficult or costly.

If our clinical trials fail to replicate positive results from earlier preclinical studies or clinical trials conducted by us or third-parties, we may be unable to successfully develop, obtain regulatory approval for or commercialize our product candidates.

The results observed from preclinical studies or early-stage clinical trials of GB-0895 or any other product candidates may not necessarily be predictive of the results of later-stage clinical trials that we conduct. Similarly, positive results from preclinical studies or early-stage clinical trials may not be replicated in our subsequent preclinical studies or clinical trials. For instance, results seen in our Phase 1 clinical trial for GB-0895 in patients with mild-to-moderate asthma may not translate to similar results in our Phase 3 clinical trials in patients with severe asthma. While a dose-ranging trial in the target patient population or studying multiple doses in the Phase 3 clinical trials for GB-0895 in patients with severe asthma was recommended by the FDA and EMA, and proceeding directly to Phase 3 with a single dose carries higher risk of failure and uncertainty, we did not conduct a dose-ranging trial prior to proceeding into Phase 3 clinical trials in severe asthma. Based on the results of our Phase 1 clinical trial and other scientific considerations, we are evaluating GB-0895 at a single 300 mg subcutaneous dose every six months ("Q26W") in our Phase 3 clinical trials in severe asthma. However, there is no guarantee that the positive results generated at such dose in the completed Phase 1 clinical trial in mild-to-moderate asthma will demonstrate similar results in our Phase 3 clinical trials in patients with severe asthma, and we may be required to conduct additional trials before we can submit a marketing application for the approval of GB-0895. Furthermore, our product candidates may not be able to demonstrate similar activity or adverse event profiles as those observed in earlier studies and trials, and we may not have generated sufficient safety data to support a marketing application by the time of our targeted submission as other third-party products or product candidates that we believe may have similar profiles. In addition, in our planned future clinical trials, we may utilize clinical trial designs or dosing regimens that have not been tested in prior clinical trials.

There can be no assurance that any of our clinical trials will ultimately be successful or support further clinical development of GB-0895 or any other product candidates. There is a high failure rate for drugs proceeding through clinical trials. Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials after achieving positive results in early-stage development, and we cannot be certain that we will not face similar setbacks. These setbacks have been caused by, among other things, adverse safety or efficacy observations made in clinical trials.

Additionally, we intend to utilize an "open-label" clinical trial design for certain of our clinical trials, such as our Phase 1 clinical trial of GB-5267 for the treatment of platinum-resistant ovarian cancer. An "open-label" clinical trial is one where both the patient and investigator know whether the patient is receiving the investigational product candidate or either an existing approved drug or placebo. Most open-label clinical trials test only the investigational product candidate and sometimes may do so at

different dose levels. Open-label clinical trials are subject to various limitations that may exaggerate any therapeutic effect as patients in open-label clinical trials are aware when they are receiving treatment. Open-label clinical trials may be subject to a "patient bias" where patients perceive their symptoms to have improved merely due to their awareness of receiving an experimental treatment. In addition, open-label clinical trials may be subject to an "investigator bias" where those assessing and reviewing the physiological outcomes of the clinical trials are aware of which patients have received treatment and may interpret the information of the treated group more favorably given this knowledge. The results from an open-label trial may not be predictive of future clinical trial results of a product candidate when studied in a controlled environment with a placebo or active control.

Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses and many companies that believed their product candidates performed satisfactorily in preclinical studies and clinical trials nonetheless failed to obtain approval from the Regulatory Authorities.

Interim, initial, topline and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we publicly disclose preliminary or topline data from our preclinical studies and clinical trials, which are based on preliminary analyses of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular preclinical study or clinical trial. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to evaluate all data fully and carefully. As a result, the topline or preliminary results that we report may differ from future results of the same studies or trials, or different conclusions or considerations may qualify such results once additional data have been received and fully evaluated. As a result, topline data should be viewed with caution until the final data are available.

From time to time, we may also disclose interim data from our preclinical studies and clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as participants enrollment continues and more participants' data become available or as participants from our clinical trials continue other treatments for their disease. Adverse differences between interim data and final data could significantly harm our business prospects.

Further, others, including Regulatory Authorities, may not accept or agree with our assumptions, estimates, calculations, conclusions, study population size, safety database size, interpretations of data or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular product candidate, the approvability or commercialization of the particular product candidate and could adversely affect the success of our business. In addition, the information we choose to publicly disclose regarding a particular study or trial is based on what is typically extensive information, and investors may not agree with what we determine is material or otherwise appropriate information to include in our disclosure. If the interim, topline or preliminary data that we report differ from actual results, or if others, including Regulatory Authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, our product candidates may be harmed, which could harm our business, financial condition, results of operations and growth prospects. Further, disclosure of interim, topline or preliminary data by us or by our competitors could result in volatility in the price of our common stock.

If we encounter difficulties identifying and enrolling participants in our clinical trials, including participants with the required or desired characteristics to achieve diversity in a trial, our clinical development activities could be delayed or otherwise adversely affected.

We depend on enrollment of participants in our clinical trials for our product candidates. We may find it difficult to enroll trial participants in our clinical trials, which could delay or prevent clinical trials of our product candidates.

Delays or difficulties in enrollment may result in increased costs or otherwise affect the timing or outcome of the planned clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of our product candidates, or result in termination of the clinical trials altogether. For example, in order to enroll a sufficient number of participants in our Phase 3 clinical trials for GB-0895 in patients with severe asthma, we plan to contract with sites across more than 40 countries in North America, Europe, Latin America and Asia Pacific.

Identifying and qualifying trial participants to participate in clinical trials of our product candidates is critical to our success. Patient and subject enrollment is affected by factors including: severity of the disease under investigation; complexity and design of the trial protocol; size of the targeted patient population; eligibility criteria for the trial in question; proximity and availability of clinical trial for the disease or condition under investigation; available sites for prospective trial participants; availability of competing therapies and clinical trials, including between our own clinical trials; efforts to facilitate timely enrollment in clinical trials; patient referral practices of physicians; ability to monitor trial participants adequately during and after treatment; ability to recruit clinical trial investigators with the appropriate competencies and experience; clinicians' and trial participants' perceptions as to the potential advantages and risks of the product candidate being studied in relation to other available therapies, including any new drugs or treatments that may be approved for the indications we are investigating; our ability to obtain and maintain participant informed consent; and the risk that trial participants enrolled in clinical trials will not complete a clinical trial.

The timing of our clinical trials depends on the speed at which we can recruit trial participants to participate in testing our product candidates. If trial participants are unwilling to participate in our studies because of negative publicity from adverse events in our trials or other trials of similar products, or those related to specific therapeutic area, or for other reasons, including competitive clinical trials for similar patient populations, the timeline for recruiting trial participants, conducting studies and obtaining regulatory approval of potential products may be delayed, which could also have significant commercial competitive impacts in the future.

In particular, our clinical trials will compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition may reduce the number and types of trial participants available to us, because some trial participants who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by a third-party. Since the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which may reduce the number of trial participants who are available for our clinical trials at such clinical trial sites. Additionally, if new product candidates show encouraging results, potential trial participants and their doctors may be inclined to enroll trial participants in clinical trials using those product candidates. If such new product candidates show discouraging results or other adverse safety indications, potential trial participants and their doctors may be less inclined to enroll trial participants in our clinical trials.

Due to the significant resources required for drug development and depending on our ability to access capital, we intend to prioritize the development of GB-0895 for severe asthma. Moreover, we may fail to expend our limited resources on the development of GB-0895 for the treatment of other indications or for the development of other potential future product candidates that may have been more profitable or for which there is a greater likelihood of success.

Due to the significant resources required for drug development, we must decide which indications to pursue and advance and the amount of resources to allocate to each product candidate. Our decisions concerning the allocation of research, development, collaboration, management and financial resources toward particular indications may not lead to the development of viable commercial products and may divert resources away from better opportunities. For example, our current strategy is to pursue regulatory approval of GB-0895 for the treatment of severe asthma and to evaluate a potential label expansion into COPD and other indications. If we make incorrect determinations regarding the viability or market potential of GB-0895, or misread trends in the biotechnology industry, our business, financial condition, results of operations and growth prospects could be materially and adversely affected. As a result, we may fail to capitalize on viable commercial products or profitable market opportunities, be required to forego or delay pursuit of opportunities with other product candidates or other diseases and disease pathways that may later prove to have greater commercial potential than those we choose to pursue, or relinquish valuable rights to our product candidates through collaboration, licensing or royalty arrangements in cases in which it would have been advantageous for us to invest additional resources to retain sole development and commercialization rights.

Our product candidates may face competition from biosimilars approved through an abbreviated regulatory pathway, including biosimilars of competitive products.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (collectively, the "ACA"), includes a subtitle called the Biologics Price Competition and Innovation Act of 2009 (the "BPCIA"), which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-approved reference biological product. Under the BPCIA, an application for a biosimilar product may not be submitted to

the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a Biologics License Application ("BLA") for the competing product containing the sponsor's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of the other company's product. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation and meaning are subject to uncertainty.

We believe that any of our product candidates approved as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to Congressional action or otherwise, or that the FDA will not consider our product candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing, including the potential for sponsors under FDA draft guidance issued in 2024 to demonstrate interchangeability without conducting so-called "switching" studies and the potential for sponsors under FDA draft guidance issued in 2025 to demonstrate biosimilarity without conducting comparative efficacy studies. Although the FDA has yet to finalize these draft guidance documents, these or similar efforts may increase the risk of competition for our biologic product candidates, if approved.

In the European Union, there is a special regime for biosimilars, or biological medicinal products that are similar to a reference medicinal product but that do not meet the definition of a generic medicinal product. For such products, the results of appropriate preclinical or clinical trials must be provided in support of an application. Guidelines from the EMA detail the type of quantity of supplementary data to be provided for diverse types of biological product.

In addition to the risk associated with biosimilars of our product candidates, the launch of biosimilars to products that compete with our product candidates may intensify competition in the therapeutic areas we target by lowering the overall price point and expanding access to alternative treatments. As these lower-cost biosimilars gain market share, payors may preferentially encourage their use or impose access restrictions that make it more difficult for our product candidates to obtain favorable coverage, reimbursement or formulary placement. These dynamics could materially limit our market opportunity and adversely affect our commercial prospects.

The regulatory approval processes of the Regulatory Authorities are lengthy, time-consuming and inherently unpredictable, and if we are not able to obtain, or if there are delays in obtaining, required regulatory approvals, we will not be able to commercialize, or will be delayed in commercializing, product candidates we may develop, and our ability to generate revenue will be materially impaired.

Even if we complete the necessary preclinical studies and clinical trials, the marketing approval process is expensive, time-consuming, and uncertain, and may prevent us from obtaining approvals for the commercialization of any product candidates we may develop. Any product candidate we may develop and the activities associated with its development and commercialization, including design, testing, manufacture, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by Regulatory Authorities. To obtain the requisite regulatory approvals to commercialize any of our product candidates, we and our collaboration partners must demonstrate through extensive preclinical studies and clinical trials that our products are safe, pure and potent or effective in humans, including the target population. Successful completion of clinical trials is a prerequisite to submitting a BLA to the FDA, a Marketing Authorization Application ("MAA") to the EMA, and similar marketing applications to other Regulatory Authorities, for each product candidate and, consequently, the ultimate approval and commercial marketing of any product candidates.

Clinical testing is expensive, difficult to design and implement, can take many years to complete and is inherently uncertain as to outcome. The general approach for FDA approval of a new drug is dispositive data from two or more adequate and well-controlled clinical trials of the product candidate in the relevant patient population. Regulatory Authorities may disagree with us about whether a clinical trial is adequate and well-controlled or may request that we conduct additional clinical trials prior to

regulatory approval. We cannot guarantee that any clinical trials will be conducted as planned or completed on schedule, if at all. In addition, there is no assurance that the doses, endpoints and trial designs that we intend to use for our planned clinical trials, including those that we have developed based on feedback from Regulatory Authorities or those that have been used for the approval of similar drugs, will be acceptable for future approvals. The clinical development of our product candidates is also susceptible to the risk of failure inherent at any stage of development, including failure to demonstrate purity, potency or efficacy in a clinical trial or across a broad population of patients, the occurrence of adverse events that are severe or medically or commercially unacceptable, failure to comply with protocols or applicable regulatory requirements and determination by the Regulatory Authorities that a product candidate may not continue development or is not approvable. It is possible that even if our product candidates have a beneficial effect, that effect will not be detected during clinical evaluation as a result of one or more of a variety of factors, including the size, duration, design, measurements, conduct or analysis of our clinical trials. Conversely, as a result of the same factors, our clinical trials may indicate an apparent positive effect of such product candidate that is greater than the actual positive effect, if any. Similarly, in our clinical trials we may fail to detect toxicity of, or intolerability caused by, such product candidate, or mistakenly believe that our product candidates are toxic or not well tolerated when that is not in fact the case. Serious adverse events or other adverse events, as well as tolerability issues, could hinder or prevent market acceptance of the product candidate at issue.

Our product candidates could fail to receive regulatory approval, or regulatory approval could be delayed, for many reasons, including the following:

- the Regulatory Authorities may disagree with the dosing regimen, design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the Regulatory Authorities that a product candidate is safe and effective for any of its proposed indications;
- the results of clinical trials may not meet the level of statistical significance required by the Regulatory Authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the Regulatory Authorities may disagree with our interpretation of data from clinical trials or preclinical studies;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of a BLA to the FDA or other submission or to obtain regulatory approval in the United States, the European Union or elsewhere;
- the Regulatory Authorities may not file or accept our BLA or marketing application for substantive review;
- the Regulatory Authorities may find deficiencies with or fail to approve the manufacturing processes or facilities of our CDMOs;
- staffing changes and backlogs at the Regulatory Authorities may create unexpected delays in the review and approval of any applications we may submit; and
- the approval policies or regulations of the Regulatory Authorities may significantly change in a manner rendering our clinical data insufficient for approval.

Failure to obtain marketing approval for a product candidate will prevent us from commercializing the product candidate in a given jurisdiction. We have not received approval to market any product candidates from regulatory authorities in any jurisdiction, and it is possible that none of our product candidates or any product candidates we may seek to develop in the future will ever obtain regulatory approval. We have no experience as an organization in filing and supporting the applications necessary to gain marketing approvals and will need to rely on CROs or regulatory consultants to assist us in this process. Securing regulatory approval requires the submission of extensive preclinical and clinical data and supporting information to the various regulatory authorities for each therapeutic indication to establish the product candidate's safety and efficacy. Securing regulatory approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the relevant regulatory authority. Any product candidates we develop may not be effective, may be only moderately effective or may prove to have undesirable or unintended side

effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use.

The process of obtaining marketing approvals, both in the United States and abroad, is expensive, may take many years if additional clinical trials are required, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application. The Regulatory Authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent marketing approval of a product candidate. Any marketing approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable. Additional delays or non-approval may result if an FDA Advisory Committee or other regulatory authority recommends non-approval or restrictions on approval. In addition, we may experience delays or rejections based upon additional government regulation from future legislation or administrative action, or changes in regulatory agency policy during the period of product development, clinical trials and the review process. Any such delays may decrease the attractiveness of our product candidates relative to competitive products that are expected to be approved by the applicable Regulatory Authorities prior to our product candidates, and adversely affect our business.

In addition, if our product candidates receive marketing approval, we will be subject to significant regulatory obligations regarding the submission of safety and other post-marketing information and reports and registration, and will need to continue to comply (or ensure that our third-party providers comply) with current Good Manufacturing Practices ("cGMPs") and GCPs for any clinical trials that we conduct post-approval. In addition, there is always the risk that we, a regulatory authority or a third-party might identify previously unknown problems with a product post-approval, such as adverse events of unanticipated severity or frequency. Compliance with these requirements is costly, and any failure to comply or other issues with our product candidate's post-approval could adversely affect our business, financial condition, results of operations and growth prospects.

Regulatory Authorities also may approve a product candidate for fewer or more limited indications than requested or may grant approval subject to the performance of post-marketing studies, may not approve the price we intend to charge for our product candidates, may grant approval contingent on the performance of costly post-marketing clinical trials or may not approve the labeling claims that are necessary or desirable for the successful commercialization of our product candidates. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

The Regulatory Authorities review the CMC section of regulatory filings. Any aspects found unsatisfactory by Regulatory Authorities may result in delays in clinical trials and commercialization. In addition, the Regulatory Authorities conduct pre-approval inspections ("PAIs") of clinical sites and manufacturing sites at the time of a BLA. Any findings by Regulatory Authorities and failure to comply with requirements may lead to delay in approval and failure to commercialize the product candidate.

Additional time may be required to obtain marketing authorizations for any product candidates that we develop as biologic-device combination products.

We intend to develop GB-0895 as a biologic-device combination product for administration with an autoinjector and PFS for ease of administration. Development of a product candidate as a combination product candidate requires close coordination with the Regulatory Authorities for review of each of the biologic and device components that comprise the product and would typically be reviewed by different centers within the Regulatory Authorities if offered for use as standalone products. For example, the FDA's review of a marketing application for a biologic-device combination that has a primary mode of action as a biologic would likely be subject to a biologics license application with the Center for Biologics Evaluation and Research as the lead center, with coordination with the Center for Devices and Radiological Health for the review of the device component. Although the Regulatory Authorities have or may have systems in place for the review and approval of such combination products, we may experience additional delays in the development and commercialization of such product candidates due to regulatory timing constraints and uncertainties in the product development and approval process.

For example, we currently plan to begin our pivotal Phase 3 trials of GB-0895 using a syringe and vial presentation, similar to the presentation used in prior trials of GB-0895. We intend to submit the

PFS presentation to Regulatory Authorities in our marketing submissions, including our BLA submission to the FDA. During the course of the Phase 3 trials, we also intend to conduct trials of a separate autoinjector pen device using GB-0895; it is our intention to amend our BLA submission at some point in the future include the future autoinjector pen presentation; as a result, we may be required to gather additional data before we are able to submit a marketing application for GB-0895 or any of our other current or future product candidates, if ever. Any delay of clinical trials, the repetition of one or more clinical trials, or any Regulatory Authority's need for additional data to support a combination biologic-device presentation could cause delays in approval of our product candidates, increase our costs, and could jeopardize our ability to commence sales and generate revenue.

If we fail to expand our development of GB-0895 into additional indications, or engineer and subsequently develop and commercialize other product candidates, we may be unable to grow our business and our ability to achieve our strategic objectives would be impaired.

Although we are initially focused on developing and commercializing GB-0895 for the treatment of severe asthma, we also plan to evaluate developing GB-0895 for the treatment of COPD, such evaluation to take into account expected clinical timelines, regulatory feedback, costs and the clinical data from our Phase 1b trial. Expansion into new indications will require additional, time-consuming development efforts and significant additional expense prior to commercial sale, including preclinical studies, clinical trials and approval by the Regulatory Authorities. In addition, we plan to focus on continuing to develop and commercialize GB-4362 and GB-5267. All product candidates are prone to the risks of failure that are inherent in biopharmaceutical product development, including the possibility that the product candidate will not be shown to be sufficiently safe and effective for approval by regulatory authorities. In addition, there can be no assurance that any such products that are approved will be manufactured or produced economically, successfully commercialized or widely accepted in the marketplace or be more effective than other commercially available alternatives.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval in other jurisdictions.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, while a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA grants marketing approval of a product candidate, other Regulatory Authorities must also approve the manufacturing and marketing of the product candidate in non-U.S. jurisdictions. In order to eventually market any of our product candidates in any particular foreign jurisdiction, we must establish and comply with numerous and varying regulatory requirements on a jurisdiction-by-jurisdiction basis regarding safety and efficacy. In addition, clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not guarantee regulatory approval in any other country. Approval processes vary among countries and can involve product testing and validation and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials, as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

Seeking foreign regulatory approval could result in difficulties and costs for us and require additional preclinical studies or clinical trials which could be costly and time-consuming. Regulatory requirements can vary widely from country to country and could delay or prevent the introduction of our products in those countries. The foreign regulatory approval process involves all of the risks associated with FDA approval. We do not have any product candidates approved for sale in any jurisdiction, including international markets, and we do not have experience in obtaining regulatory approval in international markets. If we fail to comply with regulatory requirements in international markets or to obtain and maintain required approvals, or if regulatory approvals in international markets are delayed, our target market will be reduced and our ability to realize the full market potential of our products will be unrealized.

Our current and future clinical trials or those of our future collaborators may reveal significant adverse events or undesirable side effects not seen in our preclinical studies and may result in a safety profile that could halt clinical development, inhibit regulatory approval, limit commercial potential, or market acceptance of any of our product candidates.

There is typically an extremely high rate of attrition for product candidates across categories of medicines proceeding through clinical trials. These product candidates may fail to show the desired safety and efficacy or safety, purity and potency profile in later stages of clinical trials despite having progressed through nonclinical studies and initial clinical trials. A number of companies in the biotechnology industry have suffered significant setbacks in later-stage clinical trials due to lack of efficacy or unacceptable safety profiles, notwithstanding promising results in earlier trials. Most product candidates that commence clinical trials are never approved as products and there can be no assurance that any of our current or future clinical trials will ultimately be successful or support further clinical development of any of our product candidates.

Undesirable side effects caused by our product candidates, whether used alone or in combination with other therapies, could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the Regulatory Authorities. We may observe unexpected and undesirable safety or tolerability issues with our product candidates in ongoing or future clinical trials. For example, GB-0895 is a biologic developed to be injected subcutaneously. There are risks inherent in subcutaneous injections, such as injection-site reactions (including redness, itching, swelling, pain and tenderness) and other side effects.

If significant adverse events or unacceptable side effects are observed in any of our current or future clinical trials, we may have difficulty recruiting trial participants to any of our clinical trials, trial participants may withdraw from trials, or we may be required to abandon the trials or our development efforts of one or more product candidates altogether. We, the Regulatory Authorities or an IRB, may impose a clinical hold, suspend or terminate clinical trials of a product candidate at any time for various reasons, including a belief that participants in such trials are being exposed to unacceptable health risks or adverse side effects. Some potential therapeutics developed in the biotechnology industry that initially showed therapeutic promise in early-stage trials have later been found to cause side effects that prevented their further development. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff. We may need to train medical personnel using our product candidates to understand the side effect profiles for our clinical trials and upon any commercialization of any of our product candidates. Inadequate training in recognizing or managing the potential side effects of any of our product candidates could result in harm to patients that are administered any of our product candidates. Even if the side effects do not preclude the drug from obtaining or maintaining marketing approval, unfavorable benefit risk ratio may inhibit market acceptance of the approved product due to its tolerability versus other therapies. In addition, an extended half-life could prolong the duration of undesirable side effects, which could also inhibit market acceptance. Any of these developments could materially harm our business, financial condition and prospects.

Moreover, clinical trials are conducted in carefully defined sets of patients who have agreed to enter into clinical trials. Consequently, it is possible that our clinical trials may indicate an apparent positive effect of a product candidate that is greater than the actual positive effect, if any, or alternatively fail to identify undesirable side effects.

In addition, even if we successfully advance our product candidates or any future product candidates through clinical trials, such trials will only include a limited number of patients and limited duration of exposure to our product candidates. As a result, we cannot be assured that adverse effects of our product candidates will not be uncovered when a significantly larger number of patients are exposed to the product candidate after approval. Further, any clinical trials may not be sufficient to determine the effect and safety consequences of using our product candidates over a multi-year period.

If any of the foregoing events occur or if one or more of our product candidates prove to be unsafe, our entire pipeline or our Generate Platform could be affected, which would have a material adverse effect on our business, financial condition, results of operations and prospects.

Even if we obtain regulatory approval for a product candidate, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.

Even if our product candidates are approved, they will be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, storage, advertising, promotion, sampling, record-keeping, conduct of post-marketing studies and submission of safety, efficacy and other post-market information, including both federal and state requirements in the United States and requirements of

comparable foreign regulatory authorities. In addition, we will be subject to continued compliance with cGMP and GCP requirements for any clinical trials that we conduct post-approval. For example, the holder of an approved BLA is obligated to monitor and report adverse events and any failure of a product to meet the specifications in the BLA. The holder of an approved BLA must also submit new or supplemental applications and obtain FDA approval for certain changes to the approved product, product labeling or manufacturing process. Advertising and promotional materials must comply with FDA rules and are subject to FDA review, in addition to other potentially applicable federal and state laws. If we fail to comply with applicable regulatory requirements following approval of any of our product candidates, a regulatory agency may: issue a warning letter asserting that we are in violation of the law and potentially restricting our ability to sell, manufacture, import or export our products; seek an injunction or impose civil or criminal penalties or monetary fines; suspend or withdraw regulatory approval or revoke a license; suspend any ongoing clinical trials; refuse to approve a pending BLA or supplements to a BLA submitted by us; seize product; or refuse to allow us to enter into supply contracts, including government contracts. Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. The occurrence of any event or penalty described above may inhibit our ability to commercialize any approved products and generate revenues.

If we are successful in gaining approval for any of our product candidates, we and our CDMOs, which manufacture our products under contract, will continue to face significant regulatory oversight of the manufacturing and distribution of our products. Product manufacturers and their facilities are subject to payment of user fees and continual review and periodic inspections by the Regulatory Authorities for compliance with cGMP and adherence to commitments made in the BLA. If we or a regulatory agency discovers previously unknown problems with a product such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory agency may impose restrictions relative to that product or the manufacturing facility, including requiring recall or withdrawal of the product from the market or suspension of manufacturing.

Any regulatory approvals that we receive for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials and surveillance to monitor the safety and efficacy of the product candidate. Certain endpoint data we hope to include in any approved product labeling also may not make it into such labeling, including exploratory or secondary endpoint data such as patient-reported outcome measures. The FDA may also require a Risk Evaluation and Mitigation Strategy ("REMS") as a condition of approval of our product candidates, which could entail requirements for long-term patient follow-up, a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Comparable requirements may apply in foreign countries. In addition, if the Regulatory Authorities approves any of our product candidates, we will have to comply with requirements including submissions of safety and other post-marketing information, reports and registration.

The Regulatory Authorities may impose consent decrees or withdraw or vary approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with our product candidates, including adverse events of unanticipated severity or frequency, or with our CDMOs or manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information, imposition of post-market studies or clinical trials to assess new safety risks or imposition of distribution restrictions or other restrictions under a REMS program or a comparable foreign program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of our products, withdrawal of the product from the market or voluntary product recalls;
- fines, warning letters or holds on clinical trials;

- refusal by Regulatory Authorities to approve pending applications or supplements to approved applications filed by us or suspension, variation or withdrawal of approvals;
- product seizure, detention or refusal to permit the import or export of our product candidates;
- total or partial suspension of production, distribution, manufacturing or clinical trials;
- operating restrictions;
- suspension of licenses; and
- injunctions, fines or the imposition of civil or criminal penalties.

Additionally, Regulatory Authorities strictly regulate marketing, labeling, advertising and promotion of products that are placed on the market. Products may be promoted only for the approved indications and in accordance with the provisions of the approved label.

The policies of the Regulatory Authorities may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. In addition, the U.S. Supreme Court's July 2024 decision to overturn established case law giving deference to Regulatory Authorities' interpretations of ambiguous statutory language has introduced uncertainty regarding the extent to which the FDA's regulations, policies and decisions may become subject to increasing legal challenges, delays and/or changes. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. For more information, see the section titled "*Business—Government Regulation.*"

If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

We may develop certain of our product candidates in combination with other therapies or as add-ons to the standard of care. Developing combination treatments increases complexity and risk, including risks of drug-drug interactions, unforeseen side effects or failures in our clinical trials that could delay or prevent their regulatory approval or limit the commercial profile of an approved label.

We plan to initiate a Phase 1 clinical trial of GB-4362 in patients receiving enfortumab vedotin plus pembrolizumab to assess GB-4362's potential as an adjunct therapy for reduction in peripheral neuropathy, while preserving antibody-drug conjugate ("ADC") anti-tumor efficacy. The use of our product candidates in combination with each other and/or in patients already receiving other companies' treatments may subject us to risks that we would not face if our product candidates were to be administered as monotherapies.

For example, either the combination of our product candidates with each other, or when used in patients already receiving other companies' products or product candidates, may result in unexpected adverse side effects or toxicities that the product candidates or other therapy do not produce when used alone. In addition, the product candidates may interact with each other, or with other companies' products or product candidates that patients receiving our product candidates may also be receiving, in undesirable ways that could negatively impact the potency or efficacy and safety of our product candidates, or of the other companies' products or product candidates. Testing product candidates in patients already receiving other treatments may increase the risk of significant adverse effects or failed clinical trials. The timing, outcome and cost of the potential adverse effects of developing products to be used in patients already receiving other therapies is difficult to predict and dependent on a number of factors that are outside our reasonable control. If serious adverse or unexpected side effects are identified during development and are determined to be attributed to our product candidates, or the result of drug-drug interactions between our product candidate and any of the concomitant therapies given to the trial subjects, we, the Regulatory Authorities, or IRBs and other reviewing entities, could interrupt, delay, or halt clinical trials and could result in a more restrictive label or particularly narrow product indication (substantially limiting the product's commercial opportunities), a REMS or the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities.

In addition, to the extent we choose to develop and commercialize a product candidate for use in patients receiving an already approved therapy, as is the case with GB-4362, any safety, efficacy, regulatory, manufacturing or supply issues that could arise with respect to the approved therapy could have an adverse impact on us. Prescribing information for the approved therapy, such as risk information like a boxed warning, or limitations of use, could negatively impact our ability to develop and commercialize a product as an add-on or as further supportive care to the approved therapy. If the approved therapy is replaced as the standard of care, the Regulatory Authorities may require us to conduct additional clinical trials, or we may not be able to obtain adequate reimbursement from third-party payors. Further, the Regulatory Authorities could revoke approval of the therapy patients in our clinical trials are receiving. The occurrence of any of these risks could result in an add-on product candidate being developed as further supportive care, if successfully developed and approved, being removed from the market or being less successful commercially. If the Regulatory Authorities revoke their approval of, or if safety, efficacy, manufacturing, or supply issues arise with respect to, therapies we choose to evaluate in conjunction with or as background or standard of care therapy for any of our product candidates, we may be unable to obtain regulatory approval of or to commercialize such product candidates in combination with these therapies. If we experience safety, tolerability or toxicity issues in any of our ongoing or planned clinical trials that allow patients to remain on other therapies, or if the efficacy data from these trials of our candidates administered to patients on other therapies are not favorable, our clinical development plans could be materially negatively affected or delayed, or we may not receive regulatory approval for our product candidates, which would materially harm our business and likely cause the market price of our common stock to decline.

In addition, because GB-4362 is expected to be administered in combination with other therapies, payors may assess the overall cost of the treatment regimen, not solely the cost or value proposition of our licensed product. Combination regimens are subject to heightened reimbursement risk, as payors may:

- decline to cover the full regimen based on the aggregated cost of the component therapies;
- require step-through use of lower-cost or single-agent treatments before approving the combination;
- assign the combination to a more restrictive formulary tier, resulting in higher patient cost-sharing or reduced utilization;
- impose prior authorization, clinical criteria or other restrictions that limit prescribing; or
- negotiate price concessions with us based on the cost structure or formulary status of the companion therapy.

Even if our product candidate demonstrates clinical benefit as part of a combination regimen, payors may determine that the incremental value is insufficient to justify the overall cost and may refuse to reimburse at levels that are acceptable to us or that support commercial viability. In addition, we do not control the pricing, contracting strategy or reimbursement profile of the companion therapy, which may change over time and adversely impact the attractiveness or economics of the combination. If coverage for the companion therapy is reduced, withdrawn, or made more restrictive, the value proposition for our product candidate could be materially weakened.

While we may in the future seek designations for our product candidates with the Regulatory Authorities that are intended to confer benefits such as a faster development process, a streamlined review or regulatory exclusivity, there can be no assurance that we will successfully obtain such designations. In addition, even if our product candidates are granted such designations, we may not be able to realize the intended benefits of such designations.

The Regulatory Authorities offer certain designations for product candidates that are designed to encourage the research and development of product candidates that are intended to address serious conditions. These designations may confer benefits such as additional interaction with regulatory authorities, streamlined development pathways and expedited review procedures. However, there can be no assurance that we will successfully obtain such designations for our product candidates. In addition, while such designations could expedite the development or approval process, they generally do not change the standards for approval. Even if we obtain such designations for our product candidates, there can be no assurance that we will realize their intended benefits.

For example, if a product is intended for the treatment of a serious or life-threatening condition and preclinical or clinical data demonstrate the potential to address an unmet medical need for this condition, the product sponsor may apply for Fast Track Designation. Fast Track Designation applies to the combination of the product candidate and the specific indication for which it is being studied. The sponsor of a Fast Track product candidate has opportunities for more frequent interactions with the

applicable FDA review team during product development and, once a BLA is submitted, the application may be eligible for priority review. A BLA submitted for a Fast Track product candidate may also be eligible for rolling review, where the FDA may consider for review sections of the BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the application. The FDA has broad discretion whether or not to grant this designation, so even if we believe a particular product candidate is eligible for this designation, there can be no assurance that the FDA would decide to grant it. Even if we do receive Fast Track Designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. The FDA may rescind any Fast Track Designation if it believes that the designation is no longer supported by data from our clinical development activities.

Even in the absence of obtaining certain designations, a sponsor can seek priority review at the time of submitting a marketing application. The FDA may designate an application for priority review if the product is intended to treat a serious condition and, if approved, would provide a significant improvement in safety or effectiveness when compared with other available therapies. Significant improvement may be illustrated by evidence of increased effectiveness in the treatment of a condition, elimination or substantial reduction of a treatment-limiting adverse reaction, documented enhancement of patient compliance that may lead to improvement in serious outcomes, or evidence of safety and effectiveness in a new subpopulation. A priority review designation is intended to direct overall attention and resources to the evaluation of such applications, and to shorten the FDA's goal for acting on a marketing application from ten months to six months. Priority review designation may be rescinded if a product no longer meets the qualifying criteria.

Where appropriate, we may secure approval from Regulatory Authorities through the use of expedited approval pathways, such as accelerated approval or comparable foreign abbreviated pathways. If we are unable to obtain such approvals, we may be required to conduct additional preclinical studies or clinical trials beyond those that we contemplate, which could increase the expense of obtaining, and delay the receipt of, necessary marketing approvals. Even if we receive accelerated approval from the FDA or approval following comparable foreign abbreviated pathways by foreign Regulatory Authorities, if our confirmatory trials do not verify clinical benefit, or if we do not comply with rigorous post-marketing requirements, the FDA or such Regulatory Authorities may seek to withdraw the accelerated approval.

Where possible, we plan to pursue accelerated development strategies in areas of high unmet need. We may seek an accelerated approval pathway for one or more of our potential future product candidates from the Regulatory Authorities. Under the accelerated approval provisions in the Federal Food, Drug, and Cosmetic Act, and the FDA's implementing regulations, the FDA may grant accelerated approval to a product candidate designed to treat a serious or life-threatening condition that provides meaningful therapeutic benefit over available therapies upon a determination that the product candidate has an effect on a surrogate endpoint or intermediate clinical endpoint that is reasonably likely to predict clinical benefit. The FDA considers a clinical benefit to be a positive therapeutic effect that is clinically meaningful in the context of a given disease, such as irreversible morbidity or mortality. For the purposes of accelerated approval, a surrogate endpoint is a marker, such as a laboratory measurement, radiographic image, physical sign or other measure that is thought to predict clinical benefit, but is not itself a measure of clinical benefit. An intermediate clinical endpoint is a clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit. The accelerated approval pathway may be used in cases in which the advantage of a new drug over available therapy may not be a direct therapeutic advantage but is a clinically important improvement from a patient and public health perspective. If granted, accelerated approval is usually contingent on the sponsor's agreement to conduct, in a diligent manner, additional post-approval confirmatory studies to verify and describe the drug's clinical benefit. Under the Food and Drug Omnibus Reform Act of 2022 ("FDORA"), the FDA is permitted to require, as appropriate, that a post-approval confirmatory study or studies be underway prior to approval or within a specified time period after the date of approval for a product granted accelerated approval. FDORA also gives the FDA increased authority to withdraw approval of a drug or biologic granted accelerated approval on an expedited basis if the sponsor fails to conduct such studies in a timely manner, send status updates on such studies to the FDA every 180 days to be publicly posted by the agency, or if such post-approval studies fail to verify the drug's predicted clinical benefit. The FDA is empowered to act, such as issuing fines, against companies that fail to conduct with due diligence any post-approval confirmatory study or submit timely reports to the agency on their progress.

Prior to seeking accelerated approval, or approval following comparable foreign abbreviated pathways, we would seek feedback from the Regulatory Authorities and would otherwise evaluate our ability to seek and receive such accelerated approval or approval following comparable foreign abbreviated pathways. There can be no assurance that after our evaluation of the feedback and other factors we will decide to pursue or submit a BLA for accelerated approval or any other form of expedited development, review or approval. Similarly, there can be no assurance that after subsequent feedback from Regulatory Authorities, we will continue to pursue or apply for accelerated approval or any other form of expedited development, review or approval, even if we initially decide to do so. Furthermore, if we decide to apply for accelerated approval, or comparable foreign abbreviated pathways, there can be no assurance that such application will be accepted or that any approval will be granted on a timely basis, or at all. The Regulatory Authorities could also require us to conduct further studies prior to considering our application or granting approval of any type, including, for example, if other products are approved via the accelerated pathway, or comparable foreign abbreviated pathway, and subsequently converted by the Regulatory Authorities to full approval. A failure to obtain accelerated approval or any other form of expedited development, review or approval for our product candidate would result in a longer period to commercialization of such product candidate, could increase the cost of development of such product candidate and could harm our competitive position in the marketplace.

Disruptions at the FDA and other government agencies caused by, funding shortages, staffing limitations, or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, prevent new or modified products from being developed, review, approved or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA and Regulatory Authorities to review and approve new products can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory, and policy changes, the FDA's or foreign regulatory authorities' ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the FDA's or foreign Regulatory Authorities' ability to perform routine functions. Average review times at the FDA and foreign Regulatory Authorities have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may also slow the time necessary for new drugs or modifications to approved drugs and biologics to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, in recent years, the U.S. government has shut down several times and certain Regulatory Authorities, such as the FDA, have had to furlough critical FDA employees and stop critical activities. In addition, the current U.S. presidential administration has issued certain policies and Executive Orders directed towards reducing the employee headcount and costs associated with U.S. administrative agencies, including the FDA, and it remains unclear the degree to which these efforts may limit or otherwise adversely affect the FDA's ability to conduct routine activities.

If a prolonged government shutdown occurs, or if renewed global health concerns, funding shortages or staffing limitations hinder or prevent the FDA or other Regulatory Authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA or other such regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Risks Related to the Manufacturing of Our Product Candidates and Our Future Pipeline

We rely on third-parties for the supply and manufacture of our product candidates for our research, preclinical and clinical activities, and may do the same for commercial supplies of our products, if approved. As our pipeline increases and matures, the increased demand for supplies from our manufacturers may increase the risk that we will not have sufficient supply when needed or at an acceptable cost.

We currently utilize, and expect to continue to utilize, CDMOs to, among other things, supply and manufacture raw materials, components, parts and consumables, and to perform quality testing for our preclinical and clinical supply for all of our product candidates. For example, we are party to agreements with Lonza AG ("Lonza"), which is currently our sole provider of drug product for GB-0895, and WuXi Biologics (Cayman) Inc. ("WuXi"), which is currently our sole provider of drug product for GB-4362. In addition, given the specialized expertise required to manufacture CAR-T therapies, we intend to rely upon Roswell Park to manufacture GB-5267. In order to produce sufficient quantities to meet the demand for clinical trials and, if approved, subsequent commercialization of our product candidates, our CDMOs will be required to increase their production and optimize their manufacturing processes

while maintaining the quality of our product candidates, as applicable. The transition to larger scale production could prove difficult. If our third-party manufacturers are not able to optimize their manufacturing processes to increase the product yield for our product candidates, or if they are unable to produce increased amounts of our product candidates while maintaining the same quality, then we may not be able to meet the demands of clinical trials or market demands, which could adversely impact our ability to timely conduct our clinical trials or commercialize our product candidates, if approved, and have a material adverse impact on our business and results of operations. Furthermore, with the increase of companies developing monoclonal antibodies and other therapeutic proteins, there may be increased competition for the supply of the raw materials that are necessary to make our monoclonal antibodies and therapeutic proteins, which could severely impact the manufacturing of our product candidates.

Even if we are able to maintain arrangements with our CDMOs, reliance on CDMOs entails additional risks, including:

- the failure of the CDMO to comply with applicable regulatory requirements and reliance on third-parties for manufacturing process development, regulatory compliance and quality assurance;
- manufacturing delays if our CDMOs give greater priority to the supply of other products over our product candidates or otherwise do not perform satisfactorily according to the terms of the agreement between us;
- limitations on supply availability resulting from capacity and scheduling constraints of third-parties;
- the possible breach of manufacturing agreements by our CDMOs because of factors beyond our control;
- the possible termination or non-renewal of the manufacturing agreements by our CDMOs, at a time that is costly or inconvenient to us; and
- the possible misappropriation of our proprietary technology and IP, including our know-how.

If we are unable to maintain our key manufacturing relationships, we may fail to find replacement CDMOs, which could delay or impair our ability to obtain regulatory approval for our product candidates. If we do find replacement CDMOs, we may not be able to enter into agreements with them on terms and conditions favorable to us and there could be a substantial delay before new facilities could be qualified and registered with the Regulatory Authorities.

We do not currently have long-term supply contracts with all of our suppliers and they are not obligated to supply materials to us for any period, in any specified quantity or at any certain price beyond the delivery contemplated by the relevant purchase orders. As a result, our suppliers could stop selling to us at commercially reasonable prices, or at all. While we intend to enter into long-term master supply agreements with certain of our suppliers and manufacturers in the future as we advance our clinical trials or commercialization plans, we may not be successful in negotiating such agreements on favorable terms or at all. Our failure to secure these arrangements as needed could have a material adverse effect on our ability to complete the development of our product candidates or, to commercialize them, if approved. If we do enter into such long-term master supply agreements, or enter into such agreements on less favorable terms than we currently have with such manufacturers, we could be subject to binding long-term purchase obligations that may be harmful to our business, including in the event that we do not conduct our trials on planned timelines or utilize the materials that we are required to purchase.

Additionally, if CDMO with whom we contract fails to perform its obligations, we may be forced to manufacture the materials ourselves, for which we may not have the capabilities or resources, or enter into an agreement with a different CDMO. In either scenario, our clinical trials supply could be delayed significantly as we establish alternative supply sources. In some cases, the technical skills required to manufacture our product candidates may be unique or proprietary to the original CDMO and we may have difficulty, or there may be contractual restrictions prohibiting us from transferring such skills to a back-up or alternate supplier, or we may be unable to transfer such skills at all. In addition, if we are required to change CDMOs for any reason, we will be required to verify that the new CDMO maintains facilities and procedures that comply with quality standards and with all applicable regulations. We will also need to verify, such as through a manufacturing comparability study, that any new manufacturing process will produce our product candidates according to the specifications previously submitted to the Regulatory Authorities. We may be unsuccessful in demonstrating the comparability of clinical supplies,

which could require the conduct of additional clinical trials. The delays associated with the verification of a new CDMO could negatively affect our ability to develop or commercialize our product candidates in a timely manner or within budget. Furthermore, a CDMO may possess technology related to the manufacture of our product candidates that such third-party owns independently. This would increase our reliance on such CDMO or require us to obtain a license from such CDMO in order to have another third-party manufacture our product candidates.

If any of our product candidates are approved by any Regulatory Authority, we will likely utilize arrangements with CDMOs for the commercial production of such product. This process is difficult and time-consuming and we may face competition for access to manufacturing facilities as there are a limited number of CDMOs operating under cGMPs that are capable of manufacturing our product candidates. Consequently, we may not be able to reach agreement with CDMOs on satisfactory terms, which could delay our commercialization.

The operations of our suppliers and CDMOs, some of which are located outside of the United States, are subject to additional risks that are beyond our control and that could harm our business, financial condition, results of operations and prospects. As a result of our global suppliers, we are subject to risks associated with doing business abroad, including:

- political unrest, terrorism, labor disputes and economic instability resulting in the disruption of trade from foreign countries in which our products are manufactured;
- the imposition of new laws and regulations, including those relating to labor conditions, quality, and safety standards, imports, duties, taxes and other charges on imports, as well as trade restrictions and restrictions on currency exchange or the transfer of funds, particularly new or increased tariffs imposed on imports from countries where our suppliers operate;
- greater challenges and increased costs with enforcing and periodically auditing or reviewing our suppliers' and CDMOs' compliance with cGMPs or status acceptable to the Regulatory Authorities;
- reduced protection for intellectual property rights, including trademark protection, in some countries;
- disruptions in operations due to global, regional or local public health crises or other emergencies or natural disasters;
- disruptions or delays in shipments; and
- changes in local economic conditions in countries where our CDMOs or suppliers are located.

In particular, there is currently significant uncertainty about the future relationship between the United States and various other countries, including China, with respect to trade policies, treaties, government regulations and tariffs. It is possible further tariffs may be imposed that could affect imports of active pharmaceutical ingredients ("APIs") used in our product candidates, or our business may be adversely impacted by retaliatory trade measures taken by China or other countries, including restricted access to such raw materials used in our product candidates. Given the unpredictable regulatory environment in China and the United States and uncertainty regarding how the U.S. or foreign governments will act with respect to tariffs, international trade agreements and policies, further governmental action related to tariffs, additional taxes, contracting matters, regulatory changes or other retaliatory trade measures in the future could occur with a corresponding detrimental impact on our business, financial condition, results of operations and growth prospects. These and other factors beyond our control could interrupt our suppliers and CDMOs' production, influence their ability to export and manufacture our clinical supplies, cost-effectively or at all, and inhibit their ability to procure certain materials, any of which could harm our business, financial condition, results of operations and prospects.

We depend on sole source and limited source suppliers for certain drug substances, drug products, raw materials, samples, components, and other materials used in our product candidates. If we are unable to source these supplies on a timely basis, or establish longer-term

contracts with our suppliers, we will not be able to complete our clinical trials on time and the development of our product candidates may be delayed.

We depend on sole source and limited source suppliers for certain raw materials, APIs, drug products, drug substances and other materials used in our product candidates. For example, we are party to agreements with WuXi, which is currently our sole provider of drug product for GB-4362, and Lonza, which is currently our sole provider of drug product for GB-0895. Any change in our relationships with such suppliers or changes to contractual terms of our agreements with them could adversely affect our business, financial condition, results of operations and prospects. Moreover, there may be difficulties in scaling up the clinical or commercial quantities of our product candidates despite such agreements, and the costs of manufacturing could become prohibitive.

Furthermore, any of the sole source and limited source suppliers upon whom we rely could stop producing our supplies, cease operations or be acquired by, or enter into exclusive arrangements with, our competitors. In addition, geopolitical tensions may impact our suppliers. For example, legislation pending in Congress could implement a prohibition on U.S. government contracts, grants, and loans from being used towards biotechnology equipment and services produced or provided by Chinese and other foreign biotechnology companies that have been named by the U.S. government to name biotechnology companies of concern. If a version of this legislation were passed into law, it could have the potential to restrict the ability of companies to work with certain Chinese biotechnology companies of concern without losing the ability to contract with, or otherwise receive funding from, the U.S. government. It is possible some of our contractual counterparties, including WuXi and Lonza, could be impacted by such future legislation or government policies. If WuXi, Lonza or any of the other third-parties that we engage to supply any materials or manufacture products for our preclinical studies and clinical trials should cease to continue to do so, or if we are prevented from using their services for any reason, we could experience delays in advancing these studies and trials while we identify and qualify replacement suppliers.

Establishing additional or replacement suppliers, and obtaining regulatory clearance or approvals that may result from adding or replacing suppliers, could take a substantial amount of time, result in increased costs and impair our ability to produce our products, which would adversely impact our business, financial condition, results of operations and prospects. Any such interruption or delay may force us to seek similar supplies from alternative sources, which may not be available at reasonable prices, or at all. Any interruption in the supply of sole source or limited source components for our product candidates would adversely affect our ability to meet scheduled timelines and budget for the development and commercialization of our product candidates, could result in higher expenses and would harm our business. Although we have not experienced any significant disruption as a result of our reliance on limited or sole source suppliers, we have a limited operating history and cannot assure you that we will not experience disruptions in our supply chain in the future as a result of such reliance or otherwise.

The product candidates we develop may be complex and difficult to manufacture. We may encounter difficulties in manufacturing, product release, shelf life, testing, storage, supply chain management or shipping. If we or any of our CDMOs encounter such difficulties, our ability to supply material for clinical trials or any approved product could be delayed or stopped.

The manufacturing processes for our product candidates are complex and, if not developed and manufactured under well-controlled conditions, can adversely impact pharmacological activity. We may encounter difficulties in manufacturing, product release, shelf life, testing, storage and supply chain management or shipping. These difficulties could be due to any number of reasons, including, but not limited to, complexities of producing batches at larger scale, equipment failure, choice and quality of raw materials and excipients, analytical testing technology and product instability. Moreover, we are currently conducting, and will in the future conduct, our clinical trials internationally. For example, we are currently enrolling patients in two global clinical trials for GB-0895 in patients with severe asthma, which are expected to include clinical trials across more than 40 countries. Logistical issues associated with shipping our product candidates and other materials globally from manufacturing sites to clinical sites, such as errors or improper handling by third-party carriers, transportation restrictions, or interruptions caused by natural disasters or force majeure events, could result in loss or destruction of, or damage to, our clinical supply, which may in turn cause delays in initiating or completing clinical trials.

As our product candidates proceed through preclinical studies to late-stage clinical trials towards potential approval and commercialization, it is common that various aspects of the development

program, such as the vendors used to manufacture drug product or manufacturing methods and formulation, are altered along the way in an effort to optimize processes and results. Our rate of innovation is high, which has caused, and will continue to cause, a high degree of technological change. As we scale the manufacturing output for particular product candidates, we plan to continuously improve yield, purity and the pharmaceutical properties of our product candidates from IND-enabling studies through commercial launch, including shelf-life stability, and solubility properties of product and drug substance. Because of continuous improvement in manufacturing processes, we may switch processes for a particular product candidate during development. However, after a change in process, additional time is required for pharmaceutical property testing, such as 6- or 12-month stability testing. Such testing may require resupplying clinical material, or making additional cGMP batches to keep up with clinical trial demand before such pharmaceutical property testing is completed.

Such technological changes can negatively impact product comparability during and after clinical development. Furthermore, technological changes may drive the need for changes in, modification to or the sourcing of new manufacturing infrastructure or may adversely affect third-party relationships. Such technological changes also carry the risk that they will not achieve these intended objectives. Any of these technological changes could cause our product candidates to perform differently and affect the results of planned or future clinical trials conducted with the materials manufactured using altered processes, such as impacting the specification and stability of the product. For example, we intend to develop a biologic-device combination for administration of GB-0895 with an autoinjector and PFS for ease of administration. Such changes may also require additional testing, notification or approval by the Regulatory Authorities. This could delay or prevent completion of clinical trials, require conducting bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay or prevent approval of our product candidates and jeopardize our ability to commence sales and generate revenue. Changes in our manufacturing processes may lead to failure of lots and this could lead to a substantial delay in our clinical trials. Our product candidates may also prove to have a stability profile that leads to a lower than desired shelf life of the final approved product. This poses risk in supply requirements, wasted stock and higher cost of goods.

We have established a number of analytical assays, and may have to establish several more, to assess the quality of our product candidates. We may subsequently identify gaps in our analytical testing strategy that might prevent release of product or could require product withdrawal or recall. For example, we may discover new impurities that have an impact on product safety, efficacy or stability. This may lead to an inability to release product candidates until the manufacturing or testing process is rectified.

Moreover, there are risks inherent in biopharmaceutical manufacturing operations that could affect our ability and the ability of the CDMOs or contract manufacturing organizations to meet our delivery requirements or provide adequate amounts of material. The convergence of process and analytical technology, raw materials, consumables, equipment, physical infrastructure, including a clean room environment, and air handling and other utilities, results in complex procedures and systems that must work effectively to manufacture our product candidates. Failure or process defects in any of the interrelated systems at either our manufacturing facilities or those of our third-party providers could adversely impact our ability to manufacture and supply our product candidates.

Certain of our product candidates require specific shipping, storage, handling and administration, which in some cases, may require cold-chain logistics and subject our product candidates to risk of loss or damage if failures occur.

Certain of our product candidates are sensitive to temperature, storage and handling conditions. They must be stored at very low temperatures in specialized freezers or specialized shipping containers until immediately prior to use. The handling and administration of our product candidates may need to be performed according to specific instructions and in some steps within specific time periods. Failure to correctly handle our product candidates could negatively impact the efficacy and/or safety of our product candidates, or cause a loss of product candidates. In addition, because it is necessary to ship our product candidates and other materials globally from manufacturing sites to clinical sites, our product candidates will need to be frozen using specialized equipment and maintained following specific procedures in order to be shipped and stored without damage in a cost-efficient manner and without degradation. For administration, the cryopreserved product container must be carefully removed from storage, and rapidly thawed under controlled temperature conditions in an area proximal to the patient's bedside and administered into the patient. The handling, thawing and administration of the cryopreserved therapy product must be performed according to specific instructions, typically using specific disposables, specific bags and in some steps within specific time periods. Failure to correctly handle our product candidates, including the potential breakage of the cryopreservation bags or to follow the instructions for thawing and administration and or failure to

administer our product candidates within the specified period post-thaw could negatively impact the efficacy and/or safety of our product candidates, or cause a loss of our clinical supply.

If any of our product candidates are approved, we will need to scale-up a cost-effective and reliable cold-chain distribution and logistics network, which we may be unable to accomplish. Failure to effectively scale-up our cold-chain supply logistics, by us or third-parties, could in the future lead to additional manufacturing costs and delays in our ability to supply required quantities for our commercial supply, if approved. For these and other reasons, we may not be able to manufacture our current or future product candidates at commercial scale or in a cost-effective manner. Even if we or our CDMOs are able to manufacture and distribute the products, if our products require specific procedures to maintain and use them, we may be limited in commercial opportunity.

We are subject to significant regulatory oversight with respect to manufacturing our product candidates. The manufacturing facilities of our CDMOs or suppliers may not meet regulatory requirements. Failure to meet cGMP requirements set forth in regulations promulgated by the Regulatory Authorities could result in significant delays in and costs of our products.

The manufacturing of therapeutics for clinical trials or commercial sale is subject to extensive regulation. Components of a finished product approved for commercial use or used in clinical trials must be manufactured in accordance with cGMP requirements. These regulations govern manufacturing processes and procedures, including recordkeeping, and the implementation and operation of quality systems to control and assure the quality of products and materials used in clinical trials. Poor control of the cGMP production processes can lead to product quality failures that can impact our ability to supply product, resulting in cost overruns and delays to clinical timelines, which could be extensive.

Such production process issues include, but are not limited to: critical deviations in the manufacturing process; facility and equipment failures; contamination of the product due to an ineffective quality control strategy; facility contamination as assessed by the facility and utility environmental monitoring program; ineffective process, equipment or analytical change management, resulting in failed lot release criteria; raw material failures due to ineffective supplier qualification or regulatory compliance issues at critical suppliers; ineffective product stability; failed lot release or facility and utility QC testing; ineffective corrective actions or preventative actions taken to correct or avoid critical deviations due to our developing understanding of the manufacturing process as we scale; and failed or defective components or consumables.

We must supply all necessary documentation in support of a BLA or other marketing authorization application on a timely basis and must adhere to the cGMP requirements of the Regulatory Authorities which are enforced, in the case of the FDA, in part through its facilities inspection program.

Regulatory authorities typically require representative manufacturing site inspections to assess adequate compliance with cGMPs and manufacturing controls as described in the filing. If either we or one of our third-party manufacturing sites fails to provide sufficient quality assurance or control, the product approval to commercialize may not be granted. Inspections by regulatory authorities may occur at any time during the development or commercialization phase of products. The inspections may be product specific or facility specific for broader cGMP inspections or as a follow up to market or development issues that the regulatory agency may identify. Deficient inspection outcomes may influence the ability of our CDMOs or suppliers to fulfill their supply obligations, impacting or delaying supply or delaying product candidates.

The manufacturing process for any products that we may develop is subject to the approval process of the Regulatory Authorities, and we will need to contract with CDMOs who we believe can meet such requirements on an ongoing basis. If we or our CDMOs are unable to reliably produce product candidates to specifications acceptable to the Regulatory Authorities, we or our collaboration partners may not obtain or maintain the approvals we or they need to commercialize such products. Even if we or our collaboration partners obtain regulatory approval for any of our product candidates, there is no assurance that either we or our contract manufacturing organizations will be able to manufacture the approved product to specifications acceptable to the Regulatory Authorities, to produce it in sufficient quantities to meet the requirements for the potential launch of the product, or to meet potential future demand. Any of these challenges could delay completion of clinical trials, require bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidates, impair commercialization efforts or increase our cost of goods. The occurrence of any of the foregoing could have an adverse effect on our business, financial condition, results of operations and growth prospects.

We have limited control over the manufacturing process of, and are dependent on, our contract manufacturing partners for compliance with cGMPs. If our CDMOs cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the Regulatory Authorities, we may not be able to secure and/or maintain regulatory approval for our product candidates manufactured at these facilities. In addition, we have limited control over the ability of our CDMOs to maintain adequate quality control, quality assurance and qualified personnel. Furthermore, all of our CDMOs are engaged with other companies to supply or manufacture materials or products for such companies, which exposes our CDMOs to regulatory risks for the production of such materials and products. As a result, failure to meet the regulatory requirements for the production of those materials and products may generally affect the regulatory status of our CDMOs' facility. Our failure, or the failure of our CDMOs, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our products and product candidates (including those of our collaboration partners) and our overall business operations. Our dependence upon others for the manufacture of our product candidates and raw materials may adversely affect our future profit margins and our ability to commercialize any products that receive regulatory approval on a timely and competitive basis.

The Regulatory Authorities may require us to submit product samples of any lot of any approved product together with the protocols showing the results of applicable tests at any time. Under some circumstances, the Regulatory Authorities may require that we do not distribute a lot or lots until the relevant agency authorizes such release. Deviations in the manufacturing process, including those affecting quality attributes and stability, may result in unacceptable changes in the product that could result in lot failures or product recalls. Lot failures or product recalls with respect to products produced by either our own facilities or those of our CDMOs could cause us and our collaboration partners to delay clinical trials or product launches, which could be costly to us and otherwise harm our business, financial condition, results of operations and prospects.

We also may encounter problems hiring and retaining the experienced scientific, quality-control and manufacturing personnel needed to operate our manufacturing processes and operations, which could result in delays in production or difficulties in maintaining compliance with applicable regulatory requirements. While we will train and qualify all personnel around the appropriate handling of our products and materials, we may not be able to control or ultimately detect intentional sabotage or negligence by any employee or contractor.

Risks Related to Our Reliance on Third-Parties

We rely on and expect to continue to rely on third-parties to conduct aspects of our research, preclinical studies, clinical protocol development and clinical trials for our programs and product candidates. If these third-parties do not perform satisfactorily, comply with regulatory requirements or meet expected deadlines, we may not be able to develop product candidates in a timely or cost-effective manner, or obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.

We currently rely and expect to continue to rely on third-parties, such as contract research organizations ("CROs") clinical data management organizations, medical institutions and clinical investigators, to conduct our clinical trials, including our Phase 3 clinical trials for GB-0895 in patients with severe asthma. We currently rely and expect to continue to rely on third-parties to conduct certain research and preclinical testing activities. In some cases, these third-parties may terminate their engagements with us. If we need to enter into alternative arrangements, it could delay our product development activities or increase our costs.

Our reliance on these third-parties for research and development activities will reduce our control over these activities but will not relieve us of our regulatory or contractual responsibilities. We will be responsible for ensuring that each of our preclinical studies and clinical trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with regulations, commonly referred to as Good Clinical Practices ("GCPs") for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. We also are required to register ongoing clinical trials and post the results of completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within certain timeframes.

Failure to do so can result in fines, adverse publicity and civil and criminal sanctions. For any violations of laws and regulations during the conduct of our preclinical studies and clinical trials, we could be subject to warning letters or enforcement action that may include civil penalties up to and including criminal prosecution.

We and our CROs will be required to comply with regulations, including GCPs, for conducting, monitoring, recording and reporting the results of preclinical studies and clinical trials to ensure that the data and results are scientifically credible and accurate and that the trial participants are adequately informed, among other things, of the potential risks of participating in clinical trials. We are also responsible for ensuring that the rights of our clinical trial participants are protected. These regulations are enforced by the Regulatory Authorities for any product candidates in clinical development. The FDA enforces GCP regulations through periodic inspections of clinical trial sponsors, principal investigators and trial sites. If we or our CROs fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the Regulatory Authorities may require us to perform additional clinical trials before approving our marketing applications. There is no assurance that the FDA or other Regulatory Authorities, upon inspection, will determine that any of our future clinical trials will comply with GCPs. In addition, our clinical trials must be conducted with product candidates produced in accordance with the requirements in cGMP regulations. Our failure or the failure of our CROs to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process and could also subject us to enforcement action.

Although we intend to design the clinical trials for certain of our product candidates, our collaboration partners may design the clinical trials that they are managing (in some cases, with our input) and in the case of clinical trials controlled by us, we expect that CROs will perform many of the activities required to conduct clinical trials. As a result, many important aspects of our development programs, including their conduct and timing, will, in many respects, be outside of our direct control. Our reliance on third-parties to conduct future preclinical studies and clinical trials will also result in less direct control over the management of data developed through preclinical studies and clinical trials than would be the case if we were relying entirely upon our own staff. Communicating with outside parties can also potentially lead to mistakes as well as difficulties in coordinating activities. Outside parties may: have staffing difficulties; fail to comply with contractual obligations; experience regulatory compliance issues; undergo changes in priorities or become financially distressed; form relationships with other entities, some of which may be our competitors; have human errors or be subject to cyber-attacks.

These factors may materially adversely affect the willingness or ability of third-parties to conduct our preclinical studies and clinical trials and may subject us to unexpected cost increases that are beyond our control. If the CROs do not perform preclinical studies and clinical trials in a satisfactory manner, breach their obligations to us or fail to comply with regulatory requirements, the development, regulatory approval and commercialization of our product candidates may be delayed, we may not be able to obtain regulatory approval and commercialize our product candidates, or our development programs may be materially and irreversibly harmed. If we are unable to rely on preclinical and clinical data collected by our CROs, we could be required to repeat, extend the duration of or increase the size of any clinical trials we conduct and this could significantly delay commercialization and require significantly greater expenditures.

We also expect to rely on other third-parties to transport, store and distribute the required materials for our clinical trials. In the past, certain of our third-party vendors have mishandled our materials, resulting in loss of full or partial lots of material. Any further performance failure on the part of these third-parties could result in damaged products and could delay clinical development or marketing approval of any product candidates we may develop or commercialization of our products, if approved, producing additional losses and depriving us of potential product revenue, causing us to default on our contractual commitments, result in losses that are not covered by insurance, and damage our reputation and overall perception of our products in the marketplace.

Any of the third-party organizations we utilize may terminate their engagements with us under certain circumstances. The replacement of an existing CRO or other third-party may result in the delay of the affected trials or otherwise adversely affect our efforts to obtain regulatory approvals and commercialize our product candidates. For example, although we believe there are a number of other CROs we could engage, we may not be able to enter into alternative arrangements or do so on commercially reasonable terms. In addition, while we believe there may be suitable replacements for one or more of these service providers, there is a natural transition period when a new service provider begins work. As a result, delays may occur, which could negatively impact our ability to meet our expected clinical development timelines and harm our business, financial condition, results of operations and growth prospects.

We have in the past entered into, and in the future may enter into, partnership, collaboration and licensing arrangements with third-parties to support development of programs and product candidates. If these partnership, collaboration and licensing arrangements are not successful, our business could be adversely affected.

We have entered into or sought to enter into partnership, collaboration and licensing arrangements with third-parties, which we refer to generally as our "collaboration partners" for strategic purposes, including for purposes of collaborating with collaboration partners with distinctive capabilities or experience with different modalities, working with collaboration partners capable of advancing the development and commercialization of our product candidates, and providing access to additional capital.

For example, we are party to collaboration arrangements with Amgen, Novartis, MD Anderson and Roswell Park, pursuant to which we agreed to collaborate to discover and develop protein therapeutics. We are also party to a collaboration arrangement with PMCo, pursuant to which we and PMCo agreed to collaborate on research and development activities with respect to products containing antibodies against TSLP and/or IL-4Rα, including GB-0895. We expect to enter into additional partnership, collaboration and licensing arrangements to take advantage of our Generate Platform, including for purposes of accessing additional capabilities, expertise and funding in the future. Our existing partnership, collaboration and licensing arrangements, and any future partnership, collaboration and licensing arrangements we may enter into, could pose a number of risks, including the following:

- collaboration partners may not perform their obligations as expected;
- the clinical trials conducted as part of such partnership, collaboration and licensing arrangement may not be successful;
- collaboration partners may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization of programs based on clinical trial results, changes in the strategic collaborators' focus or available funding, or external factors, such as an acquisition, which divert resources or create competing priorities;
- collaboration partners may delay clinical trials, provide insufficient funding for clinical trials, stop a clinical trial, abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaboration partners could independently develop, or develop with third-parties, products that compete directly or indirectly with our product candidates if the strategic collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- product candidates developed in partnership, collaboration and licensing arrangements with us may be viewed by our collaboration partners as competitive with their own candidates or products, which may cause collaboration partners to cease to devote resources to the development of our programs or the development or commercialization of our product candidates;
- a collaboration partner with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of any such product;
- disagreements with collaboration partners, including disagreements over proprietary rights, contract interpretation or the preferred course of development of any product candidates, may cause delays or termination of the research, development or commercialization of such product candidates, may lead to additional responsibilities for us with respect to such product candidates or may result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaboration partners may not properly maintain or defend our IP rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation;
- disputes may arise with respect to the interpretation of key terms regarding control, economic rights, or the ownership of intellectual property developed pursuant to our partnership, collaboration and licensing arrangements;

- collaboration partners may infringe the intellectual property rights of third-parties, which may expose us to litigation and potential liability;
- partnership, collaboration and licensing arrangements may, in certain instances, be terminated for the convenience of the collaboration partner and, if terminated, the development of our programs and product candidates may be delayed, or we may lose rights to IP or expertise related to such programs and products candidates, and we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates;
- future relationships may require us to incur non-recurring and other charges, assume indebtedness or contingent liabilities, increase our near- and long-term expenditures, acquire intangible assets, issue securities that dilute our existing stockholders, disrupt our management and business, or otherwise impact our ability to generate revenue from acquired intellectual property, technology and/or products sufficient to meet our objectives or even to offset the associated transaction and maintenance costs;
- we could face significant competition in seeking appropriate collaboration partners and the negotiation process and diligence process is time-consuming and complex; and
- our international operations, through any future partnerships, collaborations, acquisitions or joint ventures, may expose us to certain operating, legal, and other risks not encountered in the United States.

Whether we reach a definitive agreement for a partnership, collaboration or licensing arrangement will depend, among other things, on our assessment of the collaboration partner's resources and expertise, the terms and conditions of the proposed partnership, collaboration or licensing arrangement, and the potential collaboration partner's evaluation of a number of factors. Those factors may include, among others: (i) our technologies and capabilities, including our Generate Platform; (ii) our intellectual property position with respect to the subject program or product candidate; (iii) the design or results of clinical trials; (iv) the likelihood of approval by the Regulatory Authorities; (v) the potential market for the subject product candidate; (vi) potential competing products; and (vii) industry and market conditions generally. In addition, the significant number of business combinations among large pharmaceutical and biotechnology companies has reduced the number of potential future collaboration partners with whom we can partner.

Partnership, collaborations and licensing arrangements are complex and time-consuming to negotiate and document. We may have to relinquish valuable rights to our programs and product candidates, intellectual property or future revenue streams, or grant licenses on terms that are not favorable to us or in instances where it would have been more advantageous for us to retain sole development and commercialization rights. For some programs and product candidates, we depend on collaboration partners to design and conduct the clinical trials. As a result, we may not control the manner or time schedule in which these clinical trials are conducted, which may negatively impact our business operations. In addition, if any of our collaboration partners withdraws support for one or more of our programs or product candidates or otherwise impairs their development, our business could be negatively affected. In addition, management of our relationships with collaboration partners requires (i) significant time and effort from our management team; (ii) coordination of our marketing and research and development programs with the marketing and research and development priorities of our collaborators and (iii) effective allocation of our resources across multiple projects.

Partnerships, collaborations and licensing arrangements may never result in the successful development of programs or development and commercialization of product candidates or the generation of sales revenue. The success of these arrangements will depend heavily on the efforts and activities of our collaboration partners. Collaboration partners generally have significant discretion in determining the efforts and resources that they will apply to the development of programs and the development and commercialization of product candidates, and they may not pursue or prioritize the development and commercialization of such programs and product candidates in a manner that is in our best interests. Product revenues arising from partnership, collaboration and licensing arrangements are likely to be lower than if we directly marketed and sold products. Disagreements with collaboration partners regarding clinical development or commercialization matters can lead to delays in the development process or commercialization of the applicable product candidate and, in some cases, the termination of the partnership, collaboration or licensing arrangement. These disagreements can be difficult to resolve if neither of the parties has final decision-making authority. Partnership, collaboration and licensing arrangements are often terminable by the collaboration partner, and any such termination or expiration would adversely affect us financially and could harm our business reputation. If we were to become involved in arbitration or litigation with any of our collaboration partners, it would consume time and divert management resources away from operations, damage our reputation, impact our

ability to enter into future partnership, collaboration and licensing arrangements and may further result in substantial payments from us to our collaboration partners to settle those disputes.

We may not be able to establish additional partnership, collaboration and licensing arrangements on a timely basis, on acceptable terms, or at all, and to maintain and successfully conclude them. Such arrangements with third-parties could cause us to expend significant resources and incur substantial business risk with no assurance of financial return. If we are unable to establish or maintain partnership, collaboration and licensing arrangements on terms favorable to us and realize the intended benefits of those arrangements, our research and development efforts and potential to generate revenue may be limited and our business and operating results could be materially and adversely impacted.

Given the nature of our relationships with our collaboration partners, we often do not fully control the progression, clinical development, regulatory strategy or eventual commercialization, if approved, of our jointly-developed product candidates. As a result, our future success and the potential to receive revenues under these partnership, collaboration and licensing arrangements are significantly dependent on our collaboration partners' efforts, over which we have little control. If our partnership, collaboration and licensing arrangements do not result in the successful development and commercialization of product candidates, a collaboration partner determines not to proceed with the future development of a program or product candidate initially engineered or developed utilizing our Generate Platform, a collaboration partner implements a clinical or regulatory strategy that ultimately does not enable the further development, approval or commercialization of the product candidate, or a collaboration partner terminates its arrangement with us, we may not receive any future research funding or milestone, earnout, royalty or other contingent payments under such arrangement, which may have a material and adverse effect on our business and revenues. In addition, our ability to monitor the achievement of clinical, regulatory and commercial milestones by our collaboration partners and enforce the payment of any corresponding fees is limited. If we do not receive the funding we expect under these agreements, the development of our and our other collaboration partners' product candidates could be delayed and we may need additional resources to develop such product candidates.

In addition, in certain instances, our collaboration partners have the right to terminate their agreement with us for convenience. If one of our collaboration partners terminates its arrangement with us, we may find it more difficult to attract new partnership, collaboration and licensing arrangements and the perception of us in the business and financial communities could be adversely affected. We cannot assure investors that we will be able to maintain or expand our existing collaboration partners or that our Generate Platform will achieve adequate market acceptance among new collaboration partners. Any failure to increase penetration in our existing markets or new markets would adversely affect our ability to improve our operating results from our collaboration, partnership and licensing strategy.

All of the risks relating to product development, regulatory approval and commercialization described in this prospectus apply to the activities of our collaboration partners. If we and our collaboration partners do not receive regulatory approval for a sufficient number of product candidates originating from our Generate Platform, we may not be able sustain our business model.

We may seek to establish additional partnership, collaboration and licensing arrangements and, if we are not able to establish them on commercially reasonable terms, we may have to alter our development and commercialization plans. Certain of our partnership, collaboration and licensing arrangement may restrict our ability to develop certain products.

Our development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. For some of our product candidates, we may decide to collaborate with pharmaceutical and biotechnology companies for the development and potential commercialization of those product candidates.

We face significant competition in seeking appropriate collaboration partners. Whether we reach a definitive agreement for any additional partnership, collaboration and licensing arrangements will depend, among other things, upon our assessment of the collaboration partner's resources and expertise, the terms and conditions of the proposed partnership, collaboration or licensing arrangement and the proposed collaboration partner's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the Regulatory Authorities, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to trial participants, the potential of competing drugs, the existence of

uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge, and industry and market conditions generally. The collaboration partner may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate. The terms of any additional partnership, collaboration and licensing arrangements or other arrangements that we may establish may not be favorable to us.

We are also restricted under certain of our existing partnership, collaboration and licensing arrangement from entering into certain future agreements on certain terms with potential collaboration partners to pursue other targets on our own. These restrictions on working with targets could limit our ability to enter into partnership, collaboration and licensing arrangements with future collaboration partners or to pursue certain potentially valuable product candidates.

We may not be able to negotiate additional partnership, collaboration and licensing arrangements on a timely basis, on favorable terms or at all. Strategic alliances are complex and time-consuming to negotiate and document. If we are unable to negotiate and enter into new partnership, collaboration and licensing arrangements, we may have to curtail the development of the product candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on favorable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate product revenue.

Our revenue under our partnership, collaboration and licensing arrangements for any particular period, or on an absolute basis, can be difficult to forecast.

Because of the complexities and long development timelines inherent in the drug development business, it is difficult to predict the timing of payments under our partnership, collaboration and licensing arrangements. In particular, payments under our partnership, collaboration and licensing arrangements are, in some cases, subject to the achievement of milestones and royalties, and our collaboration partner's decisions to initiate or continue the drug creation work, and any future downstream payments with respect to product candidates generated using our Generate Platform will be subject to our collaboration partner's advancement of our programs and product candidates, over which we have no control. As a result, our revenue for any particular period can be difficult to forecast. Our revenue may grow at a slower rate than in past periods or even decline on a year-over-year basis. Because of these factors, our operating results could vary materially from quarter to quarter from our forecasts. Also, due to the limited probability of success for advancement of a program or product candidate by a collaboration partner at any given stage of development and the unpredictability of when a collaboration partner may choose to continue development of a product candidate and whether any payments will be due to us, our revenue may be difficult to forecast on an absolute basis.

Additionally, we recognize revenue either as we perform our development activities, upon completion of performing our development activities or upon achieving certain clinical, regulatory, and commercialization milestones. As a result, much of our revenue is generated from agreements entered into during previous periods. Consequently, a decline in demand for our Generate Platform, a decline in new or renewed business in any one quarter or any delays in the achievement, or any failure to achieve, development, regulatory and commercial milestones by our collaboration partners with respect to product candidates generated using our Generate Platform, may not significantly reduce our revenue for that quarter but could negatively affect our revenue in future quarters. Our revenue recognition model also makes it difficult for us to rapidly increase our revenue through increased operations in any period, as revenue from collaboration partners is recognized over the course of their drug development and commercialization efforts.

Our collaboration partners have significant discretion in determining when and whether to make announcements, if any, about the status of our collaborations, including about preclinical and clinical developments and timelines for advancing collaborations, and the price of our common stock may decline as a result of announcements of unexpected or negative results or developments.

Our collaboration partners have significant discretion in determining when and whether to make announcements about the status of our partnerships, including about preclinical and clinical

developments and timelines for advancing product candidates generated using our Generate Platform. We do not generally plan to disclose the development status and progress of individual product candidates of our collaboration partners, unless those collaboration partners have publicly disclosed such information or permit us to make such disclosures. Our collaboration partners may wish to report such information more or less frequently than we expect, or they may not report such information at all, in which case we would not report that information either, unless material to our financial statements. Certain of our collaboration partners may in the future make statements about their goals and expectations for collaborations with us. The actual timing of these events can vary dramatically due to a number of factors such as delays or failures in our or our current and future collaboration partners' drug discovery and development programs, the amount of time, effort, and resources committed by us and our current and future collaboration partners, and the numerous uncertainties inherent in the development of drugs. In addition, if a collaboration partner chooses to announce a collaboration with us, there is no guarantee that we will receive payments related to collaboration revenue in that quarter or even the following quarter, as such payments are only payable to us in accordance with the terms of the agreements governing such collaborations. The price of our common stock may decline as a result of the public announcement of unexpected results or developments in our collaborations, or as a result of our collaboration partners withholding such information.

Risks Related to Our Intellectual Property

Our success is largely based upon our intellectual property and proprietary technologies, and we may be unable to adequately protect and/or enforce our intellectual property.

Our success depends, in large part, on our ability to obtain and maintain patents, trademarks, trade secrets, know-how and other intellectual property rights and proprietary technology relating to our Generate Platform and our product candidates, as well as our ability to successfully enforce our rights against third-party infringers and/or defend our intellectual property against third-party challenges or misappropriation. If we (or our licensees or licensors who may have the right to prosecute or enforce certain patents within our portfolio) fail to appropriately prosecute or are unable to obtain and maintain patent protection for our product candidates (or aspects thereof), our ability to develop, license and/or commercialize these product candidates may be adversely affected and we may not be able to prevent competitors from making, using, selling or importing competing products. This failure or inability to properly or adequately protect the intellectual property rights relating to these product candidates could have a material adverse effect on our business, financial condition, results of operations and/or growth prospects.

The use of AI to engineer proteins is a relatively new scientific field, the continued development and potential use of which has resulted in many different patents and patent applications from organizations and individuals seeking to obtain intellectual property protection in the field. In general, patents are reserved for human inventors and significant and novel regulatory questions remain in flux about the contributory roles of AI versus the human inventors in securing intellectual property rights. We have obtained grants and issuances of certain patents relating to our Generate Platform and some of our product candidates. The issued patents and pending patent applications that we own or in-license in the United States and in key markets around the world, claim different aspects relating to our product candidates and to the engineering, development, manufacture and commercialization of other potential product candidates including, but not limited to, compositions and methods of use.

The patent application process is subject to numerous risks and uncertainties, and there can be no assurance that we or our partners will be successful in protecting our product candidates by obtaining, maintaining, enforcing and defending patents. Patent applications are being processed by national patent offices around the world. There is uncertainty about which patents will issue, and, if they do, as to when, to whom, and with what claims. These risks and uncertainties include the following:

- patent applications may not result in any patent being issued;
- patents that may be issued may not include claims that cover a broad enough scope to prevent alternative solutions by competitors;
- patents that may be issued may be challenged, invalidated, modified, revoked, circumvented, found to be unenforceable or otherwise may not provide adequate barriers to entry or any competitive advantage;
- because of the extensive time required for development, testing and regulatory review of a product candidate, it is possible that before a potential product can be commercialized, any related patent may expire, or remain in existence for only a short period following commercialization thereby reducing, or eliminating any advantage of the patent;

- our competitors, many of which have substantially greater resources than we or our partners do, and many of which have made significant investments in competing technologies, may seek, or may already have sought or obtained, patents that will limit, interfere with or eliminate our ability to make, use and sell our product candidates;
- there may be significant pressure on the U.S. government and other governmental bodies to limit the scope of patent protection or impose compulsory licensing of patent rights for disease treatments that prove successful as a matter of public policy regarding worldwide health concerns;
- countries other than the United States may have less robust patent laws than those upheld by United States courts, allowing foreign competitors the ability to exploit these laws to create, develop, and market competing products using our technologies and patents; and
- we may be involved in lawsuits and/or proceedings before government agencies, such as patent offices, to defend or enforce our patents or the patents we have rights to enforce, which could be expensive, time-consuming, distracting and/or unsuccessful.

In addition to patents, we also rely on proprietary source code, trade secrets and know-how. Although we have taken steps to protect our unpatented proprietary source code, trade secrets and know-how, including maintaining data security protocols and capabilities and entering into confidentiality agreements with third-parties, and confidential information and assignment agreements with employees, consultants and advisors, there exists the potential that third-parties may still somehow obtain this information or arrive at the same or similar information independently, which could reduce or eliminate our competitive advantages. Moreover, we may become subject to allegations that we directly or indirectly (through our consultants, advisors or independent contractors that we may engage to assist us in developing our product candidates) have wrongfully or inadvertently disclosed, acquired or used trade secrets or other proprietary information of third-parties.

We may be forced to litigate to enforce or defend our intellectual property rights.

We may be forced to litigate to enforce or defend our intellectual property rights against infringement by competitors, and to protect our trade secrets and know-how against unauthorized use, but we may not be able to detect or prevent, alone or with our licensors, infringement, misappropriation or other violation of our intellectual property rights. In so doing, we may place our intellectual property at risk of being invalidated, rendered unenforceable or limited or narrowed in scope such that we may no longer be able to adequately prevent the manufacture, sale or import of competitive product. In an infringement proceeding, a court may decide that a patent we own or a patent we may license in the future is invalid or unenforceable or may refuse to stop the other party from using the invention at issue. Even if we establish infringement, the court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may or may not be an adequate remedy. Further, an adverse result in any litigation or other proceedings before government agencies such as the United States Patent and Trademark Office (the “USPTO”), may place pending applications at risk of non-issuance or limitations in scope. Further, derivation proceedings, *ex parte* reexamination, inter partes review, post grant review and opposition proceedings provoked by third-parties or brought by the USPTO or any foreign patent authority may be used to challenge the inventorship, ownership, claim scope or validity of our patents. Additionally, because of the substantial amount of discovery typically required in connection with intellectual property litigation, there is a risk that some of our confidential and proprietary information, trade secrets or know-how could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the value of the company. Such litigation or proceedings could substantially increase our operating losses. reduce the resources available for development activities or any future sales, marketing or distribution activities and distract our personnel from their normal responsibilities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

The U.S. government and/or government agencies have provided funding or other assistance in connection with the development of the intellectual property rights owned by or licensed to us and if we enter into future arrangements involving government funding, and we make

inventions as a result of such funding, our intellectual property rights to such discoveries may be subject to the applicable provisions of the Bayh Dole Act of 1980 (the "Bayh Dole Act").

The U.S. government and/or government agencies have provided funding or other assistance in connection with the development of the intellectual property rights owned by or licensed to us, and if we enter into future arrangements involving government funding, and we make inventions as a result of such funding, our intellectual property rights to such discoveries may be subject to the applicable provisions of the Bayh Dole Act. To the extent any of our current and future intellectual property is generated through the use of U.S. government funding, the provisions of the Bayh Dole Act may similarly apply. If we enter into future arrangements involving government funding, any exercise by the government of certain rights could harm our competitive position, business, financial condition, results of operations and growth prospects.

U.S. government rights in certain inventions developed under a government-funded program include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for governmental purposes. In addition, the U.S. government would have the right to require us to grant exclusive, partially exclusive or non-exclusive licenses to any of these inventions to a third-party if the government determines that: (i) adequate steps have not been taken to commercialize the invention; (ii) government action is necessary to meet public health or safety needs or (iii) government action is necessary to meet requirements for public use under federal regulations, which are referred to as march-in rights. The U.S. government will also have the right to take title to these inventions if we fail, or the applicable licensor fails, to disclose the invention to the government, elect title and file an application to register the intellectual property within specified time limits. In addition, the U.S. government may acquire title to these inventions in any country in which a patent application is not filed within specified time limits. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us, or the applicable licensor, to expend substantial resources. In addition, the U.S. government requires that any products embodying the subject invention or produced through the use of the subject invention be manufactured substantially in the U.S. The manufacturing preference requirement can be waived if the owner of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the U.S. or that under the circumstances domestic manufacture is not commercially feasible.

If we become involved in patent litigation or other proceedings related to a determination of rights, we could incur substantial costs and expenses, substantial liability for damages or be required to stop our product development and commercialization efforts.

Our commercial success depends in part on our ability and the ability of any of our future partners to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing on the intellectual proprietary rights of third-parties. There is a substantial amount of litigation and patent office proceedings, both within and outside the United States, involving patent and other intellectual property rights in the biotechnology, biopharmaceutical, pharmaceutical and high-tech industries, including patent infringement lawsuits, oppositions, ex parte reexaminations, post-grant review, inter partes review and interference proceedings before the USPTO and corresponding foreign patent offices. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third-parties, exist in the fields in which we are pursuing product candidates.

Third-parties may assert that we are employing their proprietary technology without authorization. There may be third-party patents or patent applications with that purport to claim compositions, formulations, methods of manufacture or methods for treatment relating to our product candidates, their manufacture or use. Because patent applications in most countries remain confidential for a period of time after they are filed (commonly, 18 months), it is possible that there are unpublished patent applications that may later issue with claims that our product candidates may be alleged to infringe. Because patent applications can take many years to issue, there may be pending patent applications which do not currently seem relevant, but may later result in issued patents that our product candidates may be alleged to infringe. In addition, third-parties may obtain patents in the future and then allege that our technologies infringe upon these patents. Additionally, under U.S. patent law, a patent owner may seek a reissue within two years of issuance of a patent to broaden the scope of that patent's claims. As a result, patents that, at the time of issuance, do not appear relevant to our activities may later be broadened in a manner that could impact our business. We cannot guarantee that any of our or our licensors' patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are or will be complete or thorough, nor can we be certain that we or our licensors have identified or will identify each and every third-party patent and pending patent application in the U.S. and abroad that is relevant to or necessary for the development, manufacture, and commercialization of our current and future products and product candidates in any jurisdiction. Our interpretation of the relevance or the scope of a patent or a pending patent application may be incorrect, which may negatively impact our ability to market our products. We may incorrectly

determine that our products or product candidates are not covered by a third-party patent or may incorrectly predict whether a third-party's pending patent application will issue with claims of relevant scope. Alternatively, we may incorrectly determine that the Hatch-Waxman Amendments (as defined below) are a defense for a safe harbor to infringement of a patent we consider relevant to the research or clinical development of our product candidates. Our determination of the expiration date of any patent in the U.S. or abroad that we consider relevant may be incorrect, and we may incorrectly conclude that a third-party patent is invalid and unenforceable or not infringed. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop, manufacture and market our products and product candidates. If we fail to identify and correctly interpret relevant patents, we may be subject to infringement claims. As the number of competitors in the market grows and the number of patents issued in this area increases, the possibility of patent infringement claims escalates. Defense of infringement and other claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business.

If a third-party alleges that we infringe its intellectual property rights, we may face a number of issues, including, but not limited to:

- infringement and other intellectual property allegations, which, regardless of merit, may be expensive and time-consuming to litigate and may divert our management's attention and financial resources from our core business;
- substantial damages for infringement, which we may have to pay if a court decides that the product candidate or technology at issue infringes on or violates the third-party's rights, and, if the court finds that the infringement was willful, we could be ordered to pay treble damages and the patent owner's attorneys' fees (and, in certain jurisdictions outside of the U.S., we could be ordered to pay the patent owner's attorneys' fees even without such finding);
- a court prohibiting us from developing, manufacturing, importing, marketing or selling our product candidates, or from using our proprietary technologies, unless the third-party licenses its product rights to use, which it is not required to do;
- even if a license is available from a third-party, which may not be available, we may have to pay substantial royalties, upfront fees, milestones and other amounts and/or grant cross-licenses to intellectual property rights for our products; and
- redesigning our product candidates or processes so they do not infringe, which may not be possible or may require substantial monetary expenditures and time.

Any of the foregoing could have a material adverse effect on our business, results of operations, financial condition and prospects.

Our ability to commercialize our product candidates in the United States and abroad may be adversely affected if we cannot successfully defend against infringement allegations or obtain a license on commercially reasonable terms to relevant third-party patents that cover our product candidates. Even if we have a strong defense and/or believe that third-party intellectual property allegations are without merit, there can be no assurance that a court would find in our favor on questions of infringement, validity, enforceability and/or priority. A court of competent jurisdiction could hold that these third-party patents are valid and enforceable and have been infringed upon, which could materially and adversely affect our ability to commercialize our product candidates or technologies covered by the asserted third-party patents. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to overcome a presumption of validity. As this burden is high, which requires us to present clear and convincing evidence as to the invalidity of any such U.S. patent claims, there is no assurance that a court of competent jurisdiction would invalidate the asserted claims of any such U.S. patent.

If we are found to infringe a third-party's intellectual property rights, and we are unsuccessful in demonstrating that any such patents are invalid or unenforceable, we could be required to pay damages and/or an ongoing royalty or obtain a license from such third-party to continue developing, manufacturing, and marketing our product candidates and our technologies. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain such a license, it could be non-exclusive, thereby giving our competitors and other third-parties access to the same technologies licensed to it, and it could require us to pay substantial licensing fees and/or make ongoing royalty payments. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, we may be unable to commercialize our product candidates

or such commercialization efforts may be significantly delayed, which could in turn significantly harm our business. We also could be temporarily or permanently forced, including by court order, to cease developing, manufacturing, and commercializing the infringing technology or product candidates. In addition, we could be found liable for significant monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed on a patent or other intellectual property right.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations or could otherwise have a material adverse effect on our business, results of operations, financial condition and prospects.

Moreover, in recent years, individuals and groups that are non-practicing entities, commonly referred to as "patent trolls," have acquired patents and other intellectual property assets for the purpose of making claims of infringement in order to extract settlements. From time to time, we may receive threatening letters, notices or "invitations to license," or may be the subject of claims that our products and business operations infringe or violate the intellectual property rights of others.

We may not be successful in obtaining or maintaining necessary intellectual property rights to product components and manufacturing processes for our development pipeline.

At present, we have rights to certain intellectual property, through licenses from third-parties and under patent filings that we own to develop our product candidates. Because our pipeline may involve additional product candidates that could require the use of proprietary rights held by third-parties, the growth of our business could depend in part on our ability to acquire, in-license or use these proprietary rights. In addition, our product candidates may require specific pharmaceutical formulations to work effectively and efficiently, and these rights may be held by others. We may be unable to acquire or in-license intellectual property rights that may be necessary to permit us to implement our platform technologies or develop, manufacture or use our product candidates. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that we may consider attractive. These established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities. Further, we may be unable to negotiate a license within the specified time frame or under terms that are acceptable to us. If we are unable to do so, the third-party may offer the intellectual property rights to other parties, potentially blocking our ability to pursue our product candidate and enabling our competitors to compete with our product candidate.

In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment, or at all. If we are unable to successfully obtain rights to required third-party intellectual property rights, our business, financial condition and prospects for growth could suffer.

Our rights to develop and commercialize our product candidates are, and in the future, may be subject to the terms and conditions of licenses granted to us by others. If we fail to comply with our obligations in the agreements under which we license intellectual property rights from third-parties, or these agreements are terminated, or we otherwise experience disruptions to our business relationships with our licensors, we could lose license rights that are important to our business.

We are dependent on patent rights, know-how and proprietary technology licensed from third-parties, and we may also enter into additional license agreements with third-parties in the future. Our current and future license agreements may impose diligence, development and commercialization timelines, milestone payments, royalties, indemnification, insurance or other obligations on us. If we fail to comply with our obligations to our licensors or collaborators, our counterparties may have the right to terminate these agreements. Termination of these agreements or reduction or elimination of our rights under these agreements may result in us having to negotiate new or reinstated agreements with less favorable terms, or cause us to lose our rights under these agreements, including our rights to important intellectual property or technology that are necessary for our business. In particular, we depend substantially on our license agreement with Flagship Pioneering Inventions VI, LLC ("Flagship"), pursuant to which we in-license patent rights, know-how and other rights that cover, among other things, GB-0895 and certain aspects of our proprietary AI models (the "Flagship License Agreement"). As described elsewhere in this prospectus, Flagship Pioneering may terminate the

Flagship License Agreement for cause under specified circumstances. For more information, see the section titled "*Business—License and Collaboration Agreements.*"

Our success will depend in part on the ability of our licensors to obtain, maintain and enforce patent protection for our licensed intellectual property. Further, certain patent filings relating to our product candidates may now or in the future be subject to step-in rights of certain of our licensors. We have limited control over certain of our licensors', and may in the future have limited control of our other licensors', prosecution activities or use or licensing of any other intellectual property that may be related to our in-licensed intellectual property. Our licensors may not successfully prosecute the patent applications we license. Even if patents issue from these patent applications, our licensors may fail to maintain these patents, may determine not to pursue litigation against other companies that are infringing these patents, or may pursue such litigation less aggressively than we would. If any of our licensors or licensees having rights to file, prosecute, maintain and defend our patent rights fail to conduct these activities for patents or patent applications covering any of our product candidates, our ability to develop and commercialize those product candidates may be adversely affected and we may not be able to prevent competitors or other third-parties from making, using or selling competing products. In addition, we may sublicense certain of our rights under various third-party licenses to our collaboration partners. Any impairment of these sublicensed rights could result in reduced revenues under our partnership, collaboration or licensing arrangement or result in termination of an agreement by one or more of our collaboration partners. In addition, intellectual property rights that we may in-license in the future may be sublicensed under intellectual property owned by third-parties, in some cases through multiple tiers. The actions of our licensors may therefore affect our rights to use our sublicensed intellectual property, even if we are in compliance with all of the obligations under our license agreements. Should our licensors or any of the upstream licensors fail to comply with their obligations under the agreements pursuant to which they obtain the rights that are sublicensed to us, or should such agreements be terminated or amended, our ability to develop and commercialize our product candidates may be materially harmed.

We cannot be certain that such activities by our licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents or other intellectual property rights. Pursuant to the terms of the license agreements with our licensors, such licensors may have the right to control enforcement of our licensed patents or defense of any allegations asserting the invalidity of such patents and, even if we are permitted to pursue such enforcement or defense, we cannot ensure the cooperation of our licensors or, in some cases, other necessary parties, such as any co-owners of patents or other intellectual property from which we have not yet obtained a license. We cannot be certain that our licensors will allocate sufficient resources or prioritize their or our enforcement of such patents or defense of such allegations to protect our interests in the licensed patents. Even if we are not a party to these legal actions, an adverse outcome could harm our business because it might prevent us from continuing to license intellectual property that we may need to operate our business. In addition, even when we have the right to control patent prosecution of licensed patents and patent applications, enforcement of licensed patents, or defense of allegations asserting the invalidity of those patents, we may still be adversely affected or prejudiced by actions or inactions of our licensors and their counsel that took place prior to or after assuming control.

Our current or future license agreements may not provide exclusive or sufficient rights to use such intellectual property and technology in all relevant fields of use and in all territories in which we may wish to develop or commercialize our product candidates in the future. Some licenses granted to us may be subject to certain preexisting rights held by the licensors or certain third-parties. As a result, we may not be able to prevent third-parties from developing and commercializing competitive products in certain territories or fields.

In the event that our third-party licensors determine that, in spite of our efforts, we have materially breached a license agreement or have failed to meet certain obligations thereunder, it may elect to terminate the license agreement or, in some cases, one or more licenses under the applicable license agreement. Such termination could result in us losing the ability to develop and commercialize product candidates and technology covered by the licensed intellectual property. In the event of such termination of a third-party in-license, or if the underlying patent rights under a third-party in-license fail to provide the intended exclusivity, third-parties may be able to seek regulatory approval of, and to market, products identical to ours and we may be required to cease the development and commercialization of our product candidates. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to allegations, regardless of their merit, that we are infringing or otherwise violating a licensor's rights. Any of these events could have a material adverse effect on our competitive position, business, financial conditions, results of operations and prospects.

In addition, the agreements under which we license intellectual property or technology from third-parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant patents, know-how and proprietary technology, or increase what we believe to be our financial or other obligations under the relevant agreement. Disputes may also arise between us and our licensors regarding intellectual property subject to a license agreement, including: the scope of rights granted under the license agreement and other interpretation-related issues; whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement; our right to sublicense patent and other rights to third-parties under collaborative development relationships; our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our product candidates, and what activities satisfy those diligence obligations; and the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our collaboration partners.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on favorable terms, we may be unable to successfully develop and commercialize the affected product candidates.

We are generally also subject to all of the same risks with respect to protection of intellectual property that we license, as we are for intellectual property that we own, which are described below. If we or our licensors fail to adequately protect this intellectual property, our ability to commercialize products could suffer.

If we are unable to protect the confidentiality of our proprietary trade secrets or know-how, our business and competitive position would be harmed.

In addition to patent protection, we rely heavily upon proprietary source code and know-how protection and data security protocols and capabilities, as well as non-disclosure agreements and invention assignment agreements with our employees, consultants and third-parties, to protect our confidential and proprietary information, especially where we do not believe patent protection is appropriate or obtainable.

It is our policy to require our employees, corporate collaborators, outside scientific collaborators, CROs, CDMOs, consultants, advisors and other third-parties to execute confidentiality agreements upon the commencement of employment, consulting or business relationships with us. These agreements generally provide that all confidential information concerning our business or financial affairs developed by or made known to an individual or entity during the course of that party's relationship with us are to be kept confidential and not disclosed to third-parties, except in certain specified circumstances. In the case of employees, the agreements also provide that all inventions conceived by the individual, and that are related to our current or planned business or research and development or made during normal working hours, on our premises or using our equipment or proprietary information, are our exclusive property. In the case of consultants and other third-party service providers, the agreements provide us with certain rights to all inventions arising from the services provided to us by those individuals or entities. However, we cannot guarantee that we have entered into agreements with each party that may have or have had access to our proprietary technologies and processes. Additionally, the assignment of intellectual property rights may not be self-executing, or assignment agreements may be breached, and we may be forced to bring claims against third-parties, or defend allegations that they may bring against us, to determine the ownership of what we regard as our intellectual property. We may not be able to obtain adequate remedies for any breaches of such agreements. Ultimately, enforcing a claim that a party wrongfully or illegally disclosed or misappropriated trade secrets or know-how can be difficult, expensive and time consuming, and the outcome is unpredictable.

In addition to contractual measures, we try to protect the confidential nature of our proprietary information through other appropriate precautions, such as physical and technological security measures. However, trade secrets and know-how can be difficult to protect despite these precautions. Such measures may not, for example, in the case of misappropriation of trade secrets or know-how by an employee, former employee, or third-party with authorized access, provide adequate protection for our proprietary information. Our security measures may not prevent an employee, former employee, or consultant from misappropriating our trade secrets or know-how and providing them to a competitor, and recourse we take against such misconduct may not provide an adequate remedy to protect our interests fully. Enforcing a claim that a party wrongfully or illegally disclosed or misappropriated trade secrets or know-how can be difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, trade secrets and know-how may be independently developed by others in a

manner that could prevent legal recourse by us. If any of our confidential or proprietary information, such as our trade secrets or know-how, were to be disclosed or misappropriated, or if any such information were independently developed by a competitor, our competitive position could be harmed.

Certain former employees have obtained employment with companies or academic institutions that could be considered competitive with us and are operating their business in areas that are similar to ours, including in their business model, product design efforts, product development or formulation technology. This competition may be limited by contractual provisions which may or may not be enforceable by us in the Commonwealth of Massachusetts or other jurisdictions. In addition, we may not be aware of such competitive employment arrangements until after our trade secrets or know-how has been disclosed to potentially competitive companies.

If we choose to go to court to stop a third-party from using any of our trade secrets or know-how, we may incur substantial costs. In addition, courts inside and outside the United States are sometimes less willing or unwilling to protect trade secrets or know-how. Even if we are successful, these types of lawsuits may consume, in addition to substantial costs, significant amounts of our time and other resources. We may also need to share our proprietary know-how with current or future partners, collaborators, contractors and others located in countries at heightened risk of theft of trade secrets, including through direct intrusion by private parties or foreign actors, and those affiliated with or controlled by state actors. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

We may be subject to allegations that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third-parties or that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

As is common in the biotechnology industry, we employ individuals, including certain of our key employees, who are or were previously employed at academic institutions or other biotechnology companies, including our competitors or potential competitors. For example, our co-founder, Dr. Gevorg Grigoryan, Ph.D., has held various positions at Dartmouth College since 2017. Although we try to ensure that our employees, consultants and independent contractors do not use the proprietary information or know-how of others in their work for us, we may be subject to allegations that we, or our employees, consultants or independent contractors, have inadvertently or otherwise used or disclosed intellectual property, including trade secrets, know-how or other proprietary information, of any of our employees' former employers or other third-parties. Litigation may be necessary to defend against these allegations. If we fail in defending any such allegations, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel, which could adversely impact our business. Even if we are successful in defending against such allegations, litigation could result in substantial costs and be a distraction to management and other employees.

We may be subject to allegations challenging the inventorship or ownership of our patents and other intellectual property.

We may be subject to allegations that former employees, collaborators or other third-parties have an ownership interest in our patents or other intellectual property. Ownership disputes may arise, for example, from conflicting obligations of consultants or others who are involved in developing our product candidates. Litigation may be necessary to defend against these and other allegations challenging inventorship or ownership. If we fail in defending any such allegations, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse impact on our business. Even if we are successful in defending against such allegations, litigation could result in substantial costs and be a distraction to management and other employees.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. The assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third-parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Such claims could have a material adverse effect on our business, financial condition, results of operations and prospects.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents or applications will be due to be paid to the USPTO and various non-U.S. patent agencies in several stages over the lifetime of the patents or applications. The USPTO and non-U.S. patent agencies also require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply, and in many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, our competitors might be able to enter the market and this circumstance would have a material adverse impact on our business.

In addition, public health pandemics, geopolitical instability, natural disasters, or similar events may impair our and our licensors' ability to comply with these procedural, document submission, fee payment, and other requirements imposed by government patent agencies, which may materially and adversely affect our ability to obtain or maintain patent protection for our product candidates. There could also be delays at the USPTO caused by staffing cuts and other U.S. government actions as a result of the U.S. Department of Government Efficiency or other executive actions to reduce the size of the U.S. government.

The USPTO and various non-U.S. government agencies require compliance with certain foreign filing requirements during the patent application process. For example, in some countries, including the U.S., China, India and some European countries, a foreign filing license is required before certain patent applications are filed. The foreign filing license requirements vary by country and depend on various factors, including where the inventive activity occurred, citizenship status of the inventors, the residency of the inventors and the invention owner, the place of business for the invention owner and the nature of the subject matter to be disclosed (*e.g.*, items related to national security or national defense). In some, but not all cases, for example in China and India, a foreign filing license cannot be obtained retroactively in accordance with the applicable rules. There are situations, however, in which non-compliance can result in abandonment of a pending patent application or can be grounds for revoking or invalidating an issued patent, resulting in the loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the relevant markets with similar or identical products or technology, which could have a material adverse effect on our business, financial condition, results of operations and prospects. We may also be dependent on our licensors to take the necessary actions to comply with these requirements with respect to our licensed intellectual property.

Issued patents covering our product candidates could be found invalid or unenforceable if challenged in court.

If we or one of our collaboration partners were to initiate legal proceedings against a third-party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate is invalid and/or unenforceable. In patent litigation in the United States, counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including patent subject matter eligibility, novelty, non-obviousness, written description and/or enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. Third-parties may also raise similar allegations before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include ex parte reexamination, inter partes review, post grant review, interference proceedings and equivalent proceedings in foreign jurisdictions (*e.g.*, opposition proceedings). Such proceedings could result in revocation or amendment of our patents in such a way that they no longer cover our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability of patent rights covering a product candidate, we would lose at least part, and perhaps all, of the patent protection on our product candidates. Such a loss of patent protection could have a material adverse impact on our business. There is also a risk that, even if the validity of such patents is upheld, the court will construe the

patent's claims narrowly or decide that we do not have the right to stop the other party from using the invention at issue on the grounds that our patent claims do not cover the invention, or decide that the other party's use of our patented technology falls under the safe harbor to patent infringement under 35 U.S.C. § 271(e)(1).

If we do not obtain sufficient patent term for our product candidates, our business may be materially harmed.

Patents have a limited term. The terms of individual patents depend upon the legal term for patents in the countries in which they are granted. In most countries, including the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from the earliest non provisional filing date in the applicable country. However, the actual protection afforded by a patent varies from country to country, and also depends upon many factors, including the type of patent, the scope of coverage, the availability of regulatory related extensions, the availability of extensions for patent office delays during the examination process, the availability of legal remedies in a particular country and the validity and enforceability of the patent, and whether a portion of the patent term has been terminally disclaimed based on other patents. These factors may emerge and change over the course of time, and accordingly, a patent's expiration date might change over time in unpredictable ways. Various extensions including patent term extension and patent term adjustment may be available, but the lives of such extensions, and the protections they afford, are limited in the United States and other countries and regions. Additional patent terms may be available through a patent term adjustment process in the United States, resulting from USPTO delays during prosecution. Although various extensions may be available, the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent life has expired for a product candidate, we may be open to competition from generics or biosimilars.

Depending upon the timing, duration and specifics of FDA regulatory approval of our product candidates, one or more patents issued from U.S. patent applications that we or a future licensor file may be eligible for limited patent term restoration under the Drug Price Competition and Patent Term Restoration Act of 1984 (the "Hatch-Waxman Amendments"). The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during the FDA regulatory review process based on the first regulatory approval for a particular drug or biologic. A maximum of one patent may be extended per FDA-approved drug as compensation for the patent term lost during the FDA regulatory review process. A patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of drug approval, and only those claims covering such approved drug product, a method for using it or a method for manufacturing it may be extended. Patent term extension may also be available in certain foreign countries upon regulatory approval of our product candidates.

Despite the possibility of an extension, we may not be granted an extension in the United States or another jurisdiction because of, for example, failure to exercise due diligence during the testing phase or regulatory review process, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time or the scope of patent protection afforded could be less than we request.

For biologics, separate non-patent exclusivity under the BPCIA may apply. The FDA cannot make approval of a biosimilar effective until 12 years after the reference product's first licensure, but policy changes could affect the scope or duration of this exclusivity, and competitors may nonetheless pursue full BLAs. As a result, even with patents and any extensions, competition from biosimilars or other biologics could occur earlier than anticipated.

If we are unable to obtain patent term extension or restoration, or the foreign equivalent, or the term of any such extension is less than we request, our competitors or other third-parties may obtain approval of competing drugs following our patent expiration, and our revenue could be reduced, possibly materially. Further, if this occurs, our competitors or other third-parties may take advantage of our investment in development and trials by referencing our clinical and preclinical data and launch their drug earlier than might otherwise be the case. Any of the foregoing could materially harm our business, financial condition, results of operations and growth prospects.

We may enjoy only limited geographical protection with respect to certain patents and we may not be able to protect our intellectual property rights throughout the world.

Filing and prosecuting patent applications and defending patents covering our product candidates in all countries throughout the world would be prohibitively expensive. Competitors may use our technologies and innovations in jurisdictions where we have not obtained patent protection to develop

their own products and, further, may export otherwise infringing products to territories where we have patent protection, but enforcement rights are not as strong as those in the U.S. or Europe. These products may compete with our product candidates, and our and our licensors' future patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

In addition, we may decide to abandon national and regional patent applications before they are granted. The examination of each national or regional patent application is an independent proceeding. As a result, patent applications in the same family may issue as patents in some jurisdictions, such as in the U.S., but may issue as patents with claims of different scope or may even be refused in other jurisdictions. Furthermore, the requirements for patentability differ in certain jurisdictions and countries. Some countries do not grant claims directed to methods of treatment or have additional restrictions on the scope of method of treatment claims compared to the U.S. Accordingly, depending on the country, the scope of patent protection may vary for the same product candidate.

While we intend to protect our intellectual property rights in our expected significant markets, we cannot ensure that we will be able to initiate or maintain protection efforts in all such markets. Additionally, the prosecution of patent applications in other jurisdictions is often a longer process and patents may be granted at a later date than in the U.S., potentially delaying our ability to assert such patents against competitors. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate, which may have an adverse effect on our ability to successfully commercialize our product candidates in all of our expected significant foreign markets. If we encounter difficulties in protecting, or are otherwise precluded from effectively protecting, the intellectual property rights important for our business in such jurisdictions, the value of these rights may be diminished, and we may face additional competition in those jurisdictions.

The laws of some jurisdictions do not protect intellectual property rights to the same extent as the laws or rules and regulations in the U.S. and Europe, and many companies have encountered significant difficulties in protecting and defending such rights in such jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property rights, which could make it difficult for us to stop the infringement of any patents we obtain or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in other jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put any patents we obtain at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing as patents, and could provoke third-parties to legal claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Some countries also have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third-parties. In addition, some countries limit the enforceability of patents against government agencies or government contractors. In those countries, the patent owner may have limited remedies, which could materially diminish the value of such patents. If we are forced to grant a license to third-parties with respect to any patents relevant to our business, our competitive position may be impaired.

In Europe, a new unitary patent system took effect on June 1, 2023, which may significantly impact European patents, including those granted before the introduction of the new system. Under the new system, applicants can, upon grant of a European patent, opt for that patent to become a unitary patent which will be subject to the jurisdiction of a new unitary patent court ("UPC"). During the first seven years of the UPC's existence, patents granted before the implementation of the new system can be opted out of UPC jurisdiction, and validated as national patents in any one or more of the UPC countries. We may decide to opt out future European patents from the UPC, but doing so may preclude us from realizing the benefits of the UPC. Moreover, if we do not meet all of the formalities and requirements for opt-out under the UPC, our future European patents could remain under the jurisdiction of the UPC. Patents that are under the jurisdiction of the UPC may be challenged in a single UPC-based revocation proceeding that, if successful, could invalidate the patent in all countries who are signatories to the UPC. The UPC will provide our competitors with a new forum to centrally revoke our European patents, and allow for the possibility of a competitor to obtain pan-European injunction. Further, because the UPC is a new court system and there is no precedent for the court's laws, there is increased uncertainty regarding the outcome of any patent litigation. We are unable to predict what impact the new patent regime may have on our ability to exclude competitors in the European market. In addition to changes in patents laws, geopolitical dynamics, such as Russia's invasion of Ukraine, may also impact our ability to obtain and enforce patents in particular jurisdictions, such as the

enforcement of patent rights in Russia. If we are unable to obtain and enforce patents as needed in particular markets, our ability to exclude competitors in those markets may be reduced.

Changes in patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

As is the case with other biotechnology companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining, defending, maintaining and enforcing patents in the biotechnology industry involves both technological and legal complexity and is therefore costly, time consuming and inherently uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States and in other major jurisdictions could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents, and may diminish our ability to protect our inventions, obtain, maintain, enforce and protect our intellectual property rights and, more generally, could affect the value of our intellectual property or narrow the scope of our future owned and licensed patents.

In addition, the patent positions of companies in the development and commercialization of biopharmaceuticals are particularly uncertain. Recent rulings from the U.S. Supreme Court and the Court of Appeals for the Federal Circuit have narrowed the scope of patent protection available in specified circumstances and weakened the rights of patent owners in specified situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents once obtained. Depending on decisions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. In addition, the U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the validity and enforceability of issued patents. Depending on future actions by the U.S. Congress, federal courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our or our licensors' ability to obtain new patents and patents that we or our licensors might obtain in the future. We cannot predict how future decisions by the federal courts, the U.S. Congress or the USPTO may impact the value of our patents. Any similar adverse change in the patent laws of other jurisdictions could also adversely affect our business, financial condition, results of operations and prospects.

The USPTO has issued subject matter eligibility guidance instructing USPTO examiners on the ramifications of the Supreme Court rulings in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.* and *Association for Molecular Pathology v. Myriad Genetics, Inc.*, and applied the *Myriad* ruling to natural products and principles including all naturally occurring molecules. In addition, the USPTO continues to provide updates to its guidance that may make it impossible for us to obtain similar patent claims in future patent applications. Currently, our patent portfolio contains claims of various types and scope, including methods of medical treatment. The presence of varying types of claims in our patent portfolio significantly reduces, but may not eliminate, our exposure to potential validity challenges alleging a lack of subject matter eligibility. Furthermore, U.S. Court of Appeals for the Federal Circuit has held that an inventor on a U.S. patent must be a natural person and not a machine or AI. As a result, AI systems, regardless of their sophistication, cannot be named as inventors or joint inventors on a patent application as they are not natural persons. The USPTO has recently issued inventorship guidance for AI-assisted inventions. Given that we use AI in certain aspects of our Generate Platform, certain AI-assisted inventions may be deemed ineligible for patent protection if it is determined that there is not a sufficient level of human inventive contribution.

For our U.S. patent applications, which contain claims entitled to priority date after March 16, 2013, there is a greater level of uncertainty due to the Leahy-Smith America Invents Act (the "Leahy-Smith Act"), which was signed into law on September 16, 2011. The Leahy-Smith Act included a number of significant changes to U.S. patent law. These included provisions that affect the way patent applications are prosecuted, redefine prior art and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. The USPTO has promulgated regulations and developed procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act did not come into effect until March 16, 2013. The Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

An important change introduced by the Leahy-Smith Act is that, as of March 16, 2013, the United States transitioned to a "first-to-file" system for deciding which party should be granted a patent when two or more patent applications are filed by different parties claiming the same invention. This requires us to be cognizant of the time from invention to filing of a patent application. Furthermore, our ability to obtain and maintain valid and enforceable patents depends on whether the differences between our technology and the prior art allow our technology to be patentable over the prior art. Since patent applications in the United States and most other countries are confidential for a period of time after filing, we cannot be certain that we were the first to either: (i) file any patent application related to our product candidates or (ii) invent any of the inventions claimed in our patents or patent applications.

Among some of the other changes introduced by the Leahy-Smith Act are changes that limit where a patentee may file a patent infringement suit and new procedures providing opportunities for third-parties to challenge any issued patent in the USPTO. These new post grant challenges include post grant review and inter partes review proceedings before the Patent Trial and Appeal Board at the USPTO. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in U.S. federal court necessary to invalidate a patent claim, a third-party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third-party may attempt to use the USPTO procedures to invalidate patent claims that would not have been invalidated if first challenged by the third-party as a defendant in a district court action. However, recent changes at the USPTO have resulted in many fewer inter partes review proceedings being instituted, and the USPTO has proposed modifications to the rules of practice for implementing inter partes review proceedings. The proposed modifications, if adopted, could impact the ability of third-parties, including us, to challenge the validity of granted U.S. patents before the USPTO.

Geopolitical actions in the United States and in foreign countries could increase the uncertainties and costs surrounding the prosecution or maintenance of patent applications and the maintenance, enforcement or defense of issued patents. For example, the United States and foreign government actions related to Russia's invasion of Ukraine resulted in Russia issuing Decree No. 299 that effectively nullifies the enforcement of Russian patents owned by entities and individuals in "unfriendly" countries, including the U.S.

Similarly, changes in patent law and regulations in other countries or jurisdictions or changes in the governmental bodies that enforce them or changes in how the relevant governmental authority enforces patent laws or regulations may weaken our ability to obtain new patents or to enforce patents that we have licensed or that we may obtain in the future.

Any trademarks we have obtained or may obtain may be infringed or otherwise violated or successfully challenged. If our trademarks and trade names are not adequately protected, or if we are unable to obtain desired trademarks or trade names, then we may not be able to build brand name recognition in our markets of interest and our business may be adversely affected.

We expect to rely on trademarks as one means to distinguish our product candidates, if approved for marketing, from third-party products. Once we select new trademarks and apply to register them, our trademark applications may not be approved. During trademark registration proceedings in the U.S. and foreign jurisdictions, we may receive rejections. We are given an opportunity to respond to those rejections, but we may not be able to overcome such rejections.

We have also not yet registered trademarks for any of our product candidates in any jurisdiction. Any trademark applications we file may be rejected and registered trademarks may not be obtained, maintained or enforced. If we do not successfully register our trademarks, we may encounter difficulty in enforcing, or be unable to enforce, our trademark rights against third-parties, which could adversely affect our business and our ability to effectively compete in the marketplace.

In addition, any proprietary name we propose to use with any of our product candidate in the U.S. will need to be approved by the FDA, regardless of whether we have registered, or applied to register, the proposed proprietary name as a trademark. The FDA conducts a review of proposed proprietary names, including an evaluation of potential for confusion with other products' proprietary names, as part of the BLA review process. If the FDA objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable proprietary name that would qualify under applicable trademark laws, not infringe the existing rights of third-parties and be acceptable to the FDA.

In addition, our unregistered trademarks or trade names may be challenged, infringed, circumvented, declared generic, or determined to be infringing on, misappropriating or violating other marks. In the USPTO and in comparable agencies in many foreign jurisdictions, third-parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademark registrations may not survive such proceedings. In the event that our trademarks are successfully challenged, we could be forced to rebrand our product candidates, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. At times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion.

Our competitors may also infringe or otherwise violate our trademarks and we may not have adequate resources to enforce our trademarks. We may not be able to protect our rights to our trademarks and trade names, which we need to build name recognition among potential collaborators or customers in our markets of interest. Any of the foregoing events may have a material adverse effect on our business.

Furthermore, in many countries, owning and maintaining a trademark registration may not provide an adequate defense against a subsequent infringement allegation asserted by the owner of a senior trademark. Over the long term, if we are unable to successfully register our trademarks and trade names and establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively, and our business may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks, trade names, domain names or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely impact our financial condition or results of operations.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit it to maintain our competitive advantage. For example:

- our product candidates, if approved, may eventually become commercially available in generic or biosimilar product forms;
- others may be able to make similar molecules to our product candidates that are not covered by the claims of the patents that we license or own now or in the future;
- we, or current or future licensors or collaborators, might not have been the first to file patent applications covering certain of our or their inventions, potentially resulting in the invalidation of such patents or refusal of such applications;
- we, or current or future licensors or collaborators, might not have been the first to make the inventions covered by the issued patent or pending patent application that we license or own now or in the future.
- we, or current or future licensors or collaborators, may fail to meet our obligations to the U.S. government regarding any patents and patent applications funded by U.S. government grants, leading to the loss or unenforceability of patent rights;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing on our owned or licensed intellectual property rights;
- it is possible that our pending patent applications or those that we may own or license in the future will not lead to issued patents;
- it is possible that there are prior public disclosures that could invalidate our patents;
- it is possible that there are unpublished patent applications that may later issue with claims covering our product candidates or technology similar to ours;
- it is possible that our patents or patent applications omit individual(s) that should be listed as inventor(s) or include individual(s) that should not be listed as inventor(s), which may cause these patents or patents issuing from these patent applications to be held invalid or unenforceable or result in a change in ownership;

- issued patents to which we hold rights may be held invalid, unenforceable or narrowed in scope, including as a result of legal challenges;
- the claims of our issued patents or patent applications, if and when issued, may not cover our product candidates or narrowly cover them in such a way that competitors may be able to design around to avoid infringement allegations;
- the laws of foreign countries may not protect our proprietary rights or the proprietary rights of current or future licensors or collaborators to the same extent as the laws of the United States;
- the inventors of our patents or patent applications may become involved with competitors, develop products or processes that are similar to or alternative to those claimed in our patent filings or become hostile to our patents or patent applications on which they are named as inventors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we have engaged in scientific collaborations in the past and we intend to continue to do so in the future, and our collaborators may develop adjacent or competing products that are outside the scope of our patents;
- we may not develop additional proprietary technologies that are patentable;
- the product candidates we develop may be covered by third-party patents or other intellectual property rights;
- the patents of others may prohibit or otherwise harm our ability to conduct our business; or
- we may choose not to file a patent in order to maintain certain know-how, and a third-party may subsequently commercialize the technology and/or file a patent covering such intellectual property.

Should any of these events occur, they could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

Risks Related to the Commercialization of Our Pipeline

We have no sales, distribution or marketing experience, and may invest significant financial and management resources to establish these capabilities. If we are unable to establish such capabilities or enter into agreements with third-parties to market and sell our future products, if approved, we may be unable to generate any revenues.

Given our stage of development as a company, we have no sales, distribution or marketing experience. To successfully commercialize any products that may result from our programs, we will need to develop sales and marketing capabilities in the United States, Europe and other regions, either on our own or with others. These efforts will require substantial additional resources, some or all of which may be incurred in advance of any approval of these product candidates. Any failure or delay in the development of our or third-parties' internal sales, marketing and distribution capabilities would adversely impact the commercialization of our product candidates.

Factors that may inhibit our efforts to commercialize our product candidates on our own include:

- inadequate funding;
- our inability to recruit and retain an adequate number of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to or persuade an adequate number of physicians to prescribe any future products;
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage compared to companies with more extensive product lines; and

- unforeseen costs and expenses associated with creating an independent sales and marketing organization.

We may enter into partnership, collaboration and licensing arrangements with third-parties to utilize their mature marketing and distribution capabilities, but we may be unable to enter into marketing agreements on favorable terms, if at all. If these third-parties do not commit sufficient resources to commercialize our future products, if any, and we are unable to develop the necessary marketing capabilities on our own, we may be unable to generate sufficient product revenue to sustain our business. We may be competing with many companies that currently have extensive and well-funded marketing and sales operations. Without a significant internal team or the support of a third-party to perform marketing and sales functions, we may be unable to compete successfully against these more established companies. Our future product revenue may be lower than if we directly marketed or sold our product candidates, if approved. In addition, any revenue we receive will depend in whole or in part upon the efforts of these third-parties, which may not be successful and are generally not within our control. If we are not successful in commercializing any approved products, our future product revenue will suffer and we may incur significant additional losses.

If we do not establish sales and marketing capabilities successfully, either on our own or in collaboration with third-parties, we will not be successful in commercializing our product candidates.

The biopharmaceutical market is intensely competitive. If we are unable to compete effectively with existing drugs, new treatment methods and new technologies, we may be unable to successfully commercialize any drugs that we develop.

The biopharmaceutical market is intensely competitive and rapidly changing. Many large pharmaceutical and biotechnology companies, academic institutions, governmental agencies and other public and private research organizations, known and unknown, are pursuing the development of novel drugs for the same diseases that we are targeting or expect to target. Many of our competitors have:

- greater financial, technical and human resources than we have at every stage of the engineering, development, manufacture and commercialization of products;
- more extensive experience in preclinical testing, conducting clinical trials, obtaining regulatory approvals and in manufacturing, marketing and selling products;
- product candidates that are based on previously tested or accepted technologies;
- products that have been approved or are in late stages of development; and
- collaborative arrangements in our target markets with leading companies and research institutions.

Accordingly, our competitors may be more successful than us in obtaining patent protection, regulatory exclusivities or FDA approval and commercialize products or achieve widespread market acceptance more rapidly than we do, which may impact future approvals or sales of our product candidates that receive regulatory approval. If the FDA approves the commercial sale of our product candidates, we will also be competing with respect to marketing capabilities and manufacturing efficiency. We expect competition among products will be based on product efficacy and safety, the timing and scope of regulatory approvals, availability of supply, marketing and sales capabilities, product price, reimbursement coverage by government and private third-party payors, regulatory exclusivities and patent position. Our profitability and financial position will suffer if our product candidates receives regulatory approval but cannot compete effectively in the marketplace.

In addition, our competitors may develop partnership, collaboration and licensing arrangements with or receive funding from larger pharmaceutical or biotechnology companies, providing them with an advantage over us. Our competitors may also succeed in developing, acquiring or licensing technologies and drug products that are more effective or less costly than our product candidates, which could render our product candidates obsolete and noncompetitive. Our competitors may therefore be more successful in commercializing their products than we are, which could adversely affect our competitive position and business. Competitive products may make any products we develop obsolete or noncompetitive before we can recover the expenses of developing and commercializing our products, if approved.

We expect to face intense competition from drugs that have already been approved and accepted by the medical community for the treatment of the conditions for which we may develop products. We

also expect to face competition from new drugs that enter the market. There are a number of drugs currently under development, which may become commercially available in the future, for the treatment of the conditions for which we are trying, or may in the future try, to develop products. These drugs may be more effective, safer, less expensive or marketed and sold more effectively, than any products we develop. In most cases, we do not currently plan to run head-to-head clinical trials evaluating our product candidates against the current standards of care, which may make it more challenging for our product candidates to compete against the current standards of care due to the lack of head-to-head clinical trial data.

If we successfully develop any product candidates, and obtain approval for them, we expect to face competition based on many different factors, including: the safety and effectiveness of our products relative to alternative therapies, if any; the ease with which our products can be administered and the extent to which patients accept relatively new routes of administration; the timing and scope of regulatory approvals for these product candidates; the availability and cost of manufacturing, marketing and sales capabilities; the price of any approved product; reimbursement coverage; and patent position. See the section titled "*Business—Competition*" included elsewhere in this prospectus for examples of the competition that we face.

Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller and other early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third-parties compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites, as well as in acquiring technologies complementary to, or necessary for, our product candidates.

The commercial success of any current or future product candidate, if approved, will depend upon the degree of market acceptance by physicians, patients, third-party payors and others in the medical community.

Even with the requisite approvals, the commercial success of our products will depend in part on the medical community, patients and third-party or governmental payors, and our products in particular, as medically useful, cost-effective and safe. Furthermore, ethical, social and legal concerns about the application of AI to research and development of products could result in additional regulations restricting access to or otherwise limit demand for our products. If these products do not achieve an adequate level of acceptance, we may not generate significant product revenue and may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including: the potential efficacy and potential advantages over alternative treatments; the ability to offer our products, if approved, at competitive prices; the prevalence and severity of any side effects, including any limitations or warnings contained in a product's approved labeling; the prevalence and severity of any side effects resulting from checkpoint inhibitors or other drugs or therapies with which our products are administered; relative convenience and ease of administration; any restrictions on the use of our products, if approved, together with other medications; the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies; the strength of marketing and distribution support and timing of market introduction of competitive products; publicity concerning our products or competing products and treatments; and sufficient third-party insurance coverage or reimbursement, and patients' willingness to pay out-of-pocket in the absence of third-party coverage or adequate reimbursement.

Even if a potential product displays a favorable efficacy and safety profile in preclinical studies and clinical trials, market acceptance of the product will not be known until after it is launched. Our efforts to educate the medical community and third-party payors on the benefits of the products may require significant resources and may never be successful. Our efforts to educate the marketplace may require more resources than are required by the conventional technologies marketed by our competitors due to the complexity and uniqueness of our product candidates.

Even if we are successful in getting marketing approval for any product, commercial success of any approved products will also depend in large part on the availability of coverage and adequate reimbursement from third-party payors, including government payors such as the Medicare and Medicaid programs and entry into managed care organizations, which may be affected by existing and future healthcare reform measures designed to reduce the cost of healthcare. Third-party payors could require us to conduct additional studies, including post-marketing studies related to the cost effectiveness of a product, to qualify for reimbursement, which could be costly and divert our resources. If government and other healthcare payors do not provide adequate coverage and

reimbursement levels for any of our products once approved, whether due to healthcare reform legislation or otherwise, market acceptance and commercial success would be reduced.

In addition, if any of our products are approved for marketing, we or a collaboration partner will be subject to significant regulatory obligations regarding the submission of safety and other post-marketing information and reports for such product, and will need to continue to comply (or ensure that our third-party providers comply) with current cGMP and GCPs for any clinical trials that we or a collaboration partner conduct post-approval. In addition, there is always the risk that we or a collaboration partner or regulatory authority might identify previously unknown problems with a product post-approval, such as adverse events of unanticipated severity or frequency. Compliance with these requirements is costly, and any such failure to comply or other issues with our product candidates identified post-approval could have a material adverse impact on our business, financial condition and results of operations.

Our future growth may depend, in part, on our ability to operate in foreign markets, where we would be subject to additional regulatory burdens and other risks and uncertainties.

Our future growth may depend, in part, on our ability to develop and commercialize our product candidates in foreign markets for which we may rely on collaboration with third-parties. Recent and ongoing changes in the United States trade policy with foreign countries, including the continued uncertainty surrounding U.S. tariffs and potential retaliatory measures by foreign governments may disrupt the global supply chain for biopharmaceutical products. For example, in September 2025, President Trump announced plans to impose 100% tariffs on imported branded or patented pharmaceuticals, unless the importing company is building U.S. manufacturing capacity. It is not yet clear whether these tariffs would apply to the importation of APIs and possibly bulk drug products that are intended for use in clinical trials and not for commercial sale, which could increase the costs of materials for our clinical trials. Any direct tariffs, if imposed on pharmaceutical products, may result in increased costs for raw materials and contract manufacturing services, reduced ability to source critical contract manufacturing organizations, and a delay in our development timelines.

We are not permitted to market or promote any of our product candidates before we receive regulatory approval from the applicable foreign regulatory authority and may never receive such regulatory approval for any of our product candidates. To obtain separate regulatory approval in many other countries, we must comply with numerous and varying regulatory requirements of such countries regarding safety and efficacy and governing, among other things, clinical trials and commercial sales, pricing and distribution of our product candidates, and we cannot predict success in these jurisdictions. If we fail to comply with the regulatory requirements in international markets and receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed and our business will be adversely affected. Moreover, even if we obtain approval of our product candidates and ultimately commercialize our product candidates in foreign markets, we would be subject to the risks and uncertainties, including the burden of complying with complex and changing foreign regulatory, tax, accounting and legal requirements and reduced protection of intellectual property rights in some foreign countries.

We are subject to export and import controls, economic sanctions and anti-corruption laws and regulations of the United States and other jurisdictions. We can face criminal liability and other serious consequences for violations of these laws and regulations, which can harm our business.

Because we plan to market our products, if approved, outside of the United States, our business is subject to risks associated with doing business outside of the United States including, an increase in our expenses, diversion of our management's attention from the acquisition or development of product candidates or forgoing profitable licensing opportunities in these geographies. Accordingly, our business and financial results in the future could be adversely affected due to a variety of factors, including: efforts to develop an international sales, marketing and distribution organization; changes in a specific country's or region's political and cultural climate or economic condition; unexpected changes in foreign laws and regulatory requirements; difficulty of effective enforcement of contractual provisions in local jurisdictions; inadequate intellectual property protection in foreign countries; trade-protection measures, import or export licensing requirements such as Export Administration Regulations promulgated by the U.S. Department of Commerce and fines, penalties or suspension or revocation of export privileges; the effects of applicable foreign tax structures and potentially adverse tax consequences; and significant adverse changes in foreign currency exchange rates.

In addition to FDA and related regulatory requirements in the United States and abroad, we are subject to extensive additional federal, state and foreign anti-bribery regulations, which include the U.S. Foreign Corrupt Practices Act, U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S.

Travel Act, the UK Bribery Act 2010 and similar laws in other countries outside of the United States. We are developing and implementing a corporate compliance program based on what we believe are current best practices in the biotechnology industry for companies similar to ours, but we cannot guarantee that we, our employees, our consultants or our third-party contractors are or will be in compliance with all federal, state and foreign regulations regarding bribery and corruption. Moreover, our collaboration partners and third-party contractors located outside the United States may have inadequate compliance programs or may fail to respect the laws and guidance of the territories in which they operate. Even if we are not determined to have violated these laws, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which could also have an adverse effect on our business, financial condition and results of operations.

The insurance coverage and reimbursement status of newly approved products, in a new category of medicines, is uncertain. Failure to obtain or maintain adequate coverage and reimbursement for new or current products could limit our ability to market those products and decrease our ability to generate revenue.

The availability and extent of reimbursement by governmental and private payors is essential for most patients to be able to afford expensive treatments such as the products that we hope to develop and sell. Sales of our product candidates will depend substantially, both domestically and abroad, on the extent to which the costs of our product candidates will be paid by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations or reimbursed by government health administration authorities, private health coverage insurers and other third-party payors. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment in any of our products. If reimbursement is not available, or is available only to limited levels, we may not be able to successfully commercialize our product candidates.

There is significant uncertainty related to the insurance coverage and reimbursement of newly approved products. Government authorities and other third-party payors, such as private health insurers and health maintenance organizations, decide which drugs and treatments they will cover and the amount of reimbursement. Coverage and reimbursement by a third-party payor may depend upon a number of factors, including the third-party payor's determination that use of a product is: a covered benefit under its health plan; safe, effective and medically necessary; appropriate for the specific patient; cost-effective; and neither experimental nor investigational. For example, GB-4362, for which an IND was submitted in early December 2025, is currently being considered as a potential supportive care treatment to ameliorate important and deleterious side effects of certain cancer treatments, and third-party payors have been known to closely scrutinize the value proposition offered by supportive care treatments.

In the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors. The Centers for Medicare & Medicaid Services ("CMS"), an agency within the U.S. Department of Health and Human Services ("HHS"), determines whether and to what extent a new medicine will be covered and reimbursed under Medicare. Private payors tend to follow CMS to a substantial degree. It is difficult to predict what CMS will decide with respect to reimbursement for products.

Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that reimbursement will be available for our product candidates that we commercialize and, if reimbursement is available, the level of reimbursement. In addition, many biopharmaceutical manufacturers must calculate and report certain price reporting metrics to the government, such as average sales price and best price. Penalties may apply in some cases when such metrics are not submitted accurately and timely. Further, these prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs. Payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives.

Outside the United States, certain countries, including a number of member states of the European Union (the "Member States"), set prices and reimbursement for pharmaceutical products, or medicinal products, as they are commonly referred to in the European Union, with limited participation from the marketing authorization holders. Reimbursement agencies in Europe may be more

conservative than CMS. For example, a number of cancer drugs have been approved for reimbursement in the United States and have not been approved for reimbursement in certain European countries. We cannot be sure that such prices and reimbursement will be acceptable to us or our collaboration partners. If the regulatory authorities in these foreign jurisdictions set prices or reimbursement levels that are not commercially attractive for us or our collaboration partners, our revenues from sales by us or our collaboration partners and the potential profitability of our products in those countries would be negatively affected. An increasing number of countries are taking initiatives to attempt to reduce large budget deficits by focusing cost-cutting efforts on pharmaceuticals for their state-run health care systems. These international price control efforts have impacted all regions of the world but have been most drastic in the European Union.

Additionally, the requirements governing product pricing vary widely from country to country. Some countries require approval of the sale price of a product before it can be marketed, while in others, the pricing review period begins after marketing or product licensing approval is granted. As a result, we might obtain marketing approval for a product in a particular country, but then may experience delays in the reimbursement approval of our product or be subject to price regulations that would delay our commercial launch of the product, possibly for lengthy time periods, which could negatively impact the revenues we are able to generate from the sale of the product in that particular country. For example, the European Union provides options for its Member States to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost effectiveness of a particular product candidate to currently available therapies. A Member State may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for our product candidates. Historically, products launched in the European Union do not follow price structures of the United States and generally prices tend to be significantly lower.

Moreover, increasing efforts by governmental and third-party payors, in the United States and abroad, to cap or reduce healthcare costs may cause such organizations to limit both coverage and level of reimbursement for new products approved and, as a result, they may not cover or provide adequate payment for our product candidates.

We expect to experience pricing pressures in connection with the sale of any of our product candidates, due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, particularly prescription drugs and surgical procedures and other treatments, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our products.

For more information on the laws and regulations that may impact coverage and reimbursement of our product candidates, see the section titled "*Business—Government Regulation—Coverage and Reimbursement*" and "*—Healthcare Reform*" included elsewhere in the prospectus.

Healthcare legislative reform discourse and potential or enacted measures may have a material adverse impact on our business and results of operations and legislative or political discussions surrounding the desire for and implementation of pricing reforms may adversely impact our business.

Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by requiring, for example, (i) changes to our manufacturing arrangements, (ii) additions or modifications to product labeling, (iii) the recall or discontinuation of our products or (iv) additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business. See the sections titled "*Business—Government Regulation—Coverage and Reimbursement*" and "*—Healthcare Reform*" included elsewhere in this prospectus.

The containment of healthcare costs has become a priority of federal, state and foreign governments and the prices of products have been a focus in this effort. There have been a number of federal and state proposals during the last few years regarding the pricing of pharmaceutical products, limiting coverage and the amount of reimbursement for drugs and other medical products, government control and other changes to the healthcare system in the United States. Governments have shown

significant interest in implementing cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic products.

For example, the Inflation Reduction Act of 2022 (the "IRA") includes several provisions that will impact our business to varying degrees, including provisions that allow the U.S. government to negotiate Medicare Part B and Part D pricing for certain high-cost drugs and biologics without generic or biosimilar competition, among others.

Further, the IRA also imposed rebates with respect to certain drugs and biologics covered under Medicare Part B or Medicare Part D to penalize price increases that outpace inflation. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit our revenue generated from the sale of any approved products.

The One Big Beautiful Bill Act (the "OBBBA") also included significant reforms to Medicaid, including an estimated $1 trillion in reduced federal Medicaid spending from 2025 through 2034, the imposition of work requirements for certain adult enrollees, more frequent eligibility redeterminations and increased cost-sharing for beneficiaries. These changes are expected to reduce overall Medicaid enrollment and access to care. Although the effect on our business is currently unknown, any decrease in the number of insured patients or reimbursement levels for our products could adversely affect our revenue and commercial prospects.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. For example, CMS may develop new payment and delivery models, such as bundled payment models. In addition, recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their commercial products, which has resulted in several Congressional inquiries and proposed and enacted state and federal legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs and reform government program reimbursement methodologies for pharmaceutical products. Congress has indicated that it will continue to seek new legislative measures to control drug costs.

In December 2021, Regulation No 2021/2282 on Health Technology Assessment ("HTA") amending Directive 2011/24/EU, was adopted in the EU. This Regulation, which entered into force in January 2022 and became applicable in January 2025, is intended to boost cooperation among Member States in assessing health technologies, including new medicinal products, and providing the basis for cooperation at EU level for joint clinical assessments in these areas. The Regulation will permit Member States to use common HTA tools, methodologies and procedures across the EU, working together in four main areas, including joint clinical assessment of the innovative health technologies with the most potential impact for patients, joint scientific consultations whereby developers can seek advice from HTA authorities, identification of emerging health technologies to identify promising technologies early, and continuing voluntary cooperation in other areas. Individual Member States will continue to be responsible for assessing nonclinical (*e.g.*, economic, social, ethical) aspects of health technologies and making decisions on pricing and reimbursement.

These laws, and future supranational, national state and federal healthcare reform measures may be adopted in the future, any of which may result in additional reductions in Medicare and other healthcare funding and otherwise affect the prices we may obtain for our product candidates for which we may obtain regulatory approval or the frequency with which any such product candidate is prescribed or used.

If the market opportunities for our product candidates are smaller than we believe they are, our revenue may be adversely affected and our business may suffer.

The estimates of market opportunity and forecasts of market growth included in documents that we file with the Securities and Exchange Commission (the "SEC") may prove to be smaller than we believe, and even if the markets in which we compete achieve the forecasted growth, our business may not grow at similar rates, or at all. Although we are initially focused on developing and commercializing GB-0895 for the treatment of severe asthma, we also plan to evaluate developing GB-0895 for the treatment of COPD, such evaluation to take into account expected clinical timelines, regulatory feedback, costs and the clinical data from our Phase 1b trial. In addition, an important area of focus of our research and product development activities is the development of treatments for severe rare genetic diseases. Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with our product candidates, are based on estimates and independent market research, industry and general publications obtained from third-parties. Market opportunity estimates and growth forecasts included in this prospectus and the other documents that we file with the SEC are subject to significant

uncertainty and are based on assumptions and estimates. These estimates, which have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations and market research, may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these indications. Additionally, the potentially addressable patient population may not ultimately be amenable to treatment with our product candidate if we cannot achieve our intended dosing interval. Our market opportunity may also be limited by current and future products of our competitors that are already available in the market or may enter the market for such patients. If any of our estimates prove to be inaccurate, the market opportunity for our product candidates could be significantly diminished and have an adverse material impact on our business.

The market opportunities of some of our product candidates may be limited to those patients who are ineligible for or have failed prior treatments and for which the market opportunities may be small.

In some therapeutic areas, like oncology, the FDA often approves new therapies initially only for use by patients with relapsed or refractory advanced disease. For example, we are developing GB-5267 in collaboration with Roswell Park, who submitted an IND for GB-5267 in early December 2025 to conduct a Phase 1 clinical trial in patients with relapsed or refractory platinum-resistant ovarian cancer. In the event GB-5267 proves to be sufficiently beneficial we would expect that approval could be sought in earlier lines of treatment and potentially as a first line therapy but there is no guarantee that GB-5267 or any other product candidates targeting relapsed or refractory diseases, even if approved, would be approved for earlier lines of therapy, and, prior to any such approvals, we may have to conduct additional clinical trials.

In addition, our projections of both the number of people who have platinum-resistant ovarian cancer or other cancers we may be targeting, as well as the subset of people with these cancers in a position to receive second- or third-line therapy, and who have the potential to benefit from treatment with our product candidates, are based on our beliefs and estimates. These estimates have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations or market research, and may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these cancers. The number of trial participants may turn out to be lower than expected. Additionally, the potentially addressable patient population for our product candidates may be limited or may not be amenable to treatment with our product candidates. Even if we obtain significant market share for our products, if approved, because the potential target populations are small, we may never achieve profitability without obtaining regulatory approval for additional indications.

Off-label use or misuse of our product candidates may harm our reputation in the marketplace or result in injuries that lead to costly product liability suits.

If our product candidates are approved by the FDA, we will only promote or market them in a manner consistent with their approved labeling. We will train our marketing and sales force to comply with laws and regulations restricting the promotion of our product candidates for uses outside of the indications for use approved by the Regulatory Authorities, known as “off-label uses.” Physicians are permitted to prescribe medications for off-label conditions and indications not listed on these approved labels. Furthermore, the use of our product candidates for indications other than those approved by the FDA may not effectively treat such conditions. Any such off-label use of our product candidates could harm our reputation in the marketplace among physicians and patients. There may also be increased risk of injury to patients if physicians attempt to use our product candidates for these uses for which they are not approved, which could lead to product liability suits that might require significant financial and management resources and that could harm our reputation. Similar requirements and considerations apply abroad.

We may be subject, directly or indirectly, to federal and state healthcare fraud and abuse laws, and false claims laws. If we are unable to comply, or have not fully complied with such laws, we could face substantial penalties.

If we obtain FDA approval for any of our product candidates and begin commercializing those products in the United States, our operations will be directly, or indirectly through our prescribers, customers and purchasers, subject to various federal and state fraud and abuse laws and regulations that will impact, among other things, our proposed sales, marketing, and educational programs. The laws that will affect our operations include, but are not limited to the following:

- The federal Health Care Program Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or

covertly, in cash or in kind, in return for the purchase, recommendation, leasing or furnishing of an item or service reimbursable under a federal healthcare program, such as the Medicare and Medicaid programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand, and prescribers, purchasers, and formulary managers on the other. In addition, a person or entity does not need to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation.

- The federal civil and criminal false claims laws and civil monetary penalty laws prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment or approval from Medicare, Medicaid or other government payors that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making or causing to be made a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act.
- The federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), which created new federal criminal statutes that prohibit a person from knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.
- The U.S. Federal Food, Drug and Cosmetic Act, which prohibits, among other things, the adulteration or misbranding of drugs, biologics, and medical devices.
- Federal transparency laws, including the federal Physician Payment Sunshine Act, which require disclosure of payments and other transfers of value provided to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), certain non-physician practitioners (physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, anesthesiology assistants and certified nurse-midwives) and teaching hospitals, and ownership and investment interests held by physicians and their immediate family members.
- Federal government price reporting laws, which require drug makers to calculate and report complex pricing metrics in an accurate and timely manner to government programs.
- Federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.
- State law equivalents of each of the above federal laws and state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures are also applicable to us and many of them differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts in certain circumstances.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities, including certain consulting agreements we have entered into with physicians who are paid, in part, in the form of stock or stock options could be subject to challenge under one or more such laws. If our operations are found to be in violation of any of the laws described above or any other government regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, mandatory or discretionary exclusion from participation in government health care programs, such as Medicare and Medicaid, imprisonment, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

The provision of benefits or advantages to physicians to induce or encourage the prescription, recommendation, endorsement, purchase, supply, order or use of medicinal products is prohibited in the EU. The provision of benefits or advantages to physicians is also governed by the national anti-bribery laws of Member States, such as the UK Bribery Act 2010. Infringement of these laws could result in substantial fines and imprisonment.

Payments made to physicians in certain Member States must be publicly disclosed. Moreover, agreements with physicians often must be the subject of prior notification and approval by the

physician's employer, his or her competent professional organization or the regulatory authorities of the individual Member States. These requirements are provided in the national laws, industry codes or professional codes of conduct, applicable in the Member States. Failure to comply with these requirements could result in reputational risk, public reprimands, administrative penalties, fines or imprisonment.

Product liability lawsuits against us could cause us to incur substantial liabilities and could limit commercialization of any product candidate that we may develop.

We face an inherent risk of product liability exposure related to the testing of any of our current or future product candidates in clinical trials, and we may face an even greater risk if we commercialize any product candidate that we may develop. If we cannot successfully defend ourselves against allegations that our product candidates caused injuries, or we failed to warn of potential injuries, we could incur substantial liabilities. Regardless of merit or eventual outcome, allegations of liability may result in decreased demand for any product candidate that we may develop; loss of revenue; substantial monetary awards to patients, healthy volunteers or their children; significant time and costs to defend the related litigation; withdrawal of clinical trial participants; the inability to commercialize any product candidate(s) that we may develop; and injury to our reputation and significant negative media attention.

We carry product liability insurance which we believe to be sufficient in light of our current clinical programs; however, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. If and when we obtain marketing approval for product candidates, we intend to expand our insurance coverage to include the sale of commercial products; however, we may be unable to obtain product liability insurance on commercially reasonable terms or in adequate amounts. On occasion, large judgments have been awarded in class action lawsuits based on drugs or medical treatments that had unanticipated adverse effects. A successful product liability claim or series of claims brought against us could cause our stock price to decline and, if judgments exceed our insurance coverage, could adversely affect our results of operations and business.

Risks Related to Our Business Operations and Employee Matters

Our future success depends on our ability to retain key employees, consultants and advisors and to attract, retain and motivate qualified personnel.

Our ability to compete in the highly competitive biotechnology industry depends upon our ability to attract and retain highly qualified managerial, scientific, technical and medical personnel. We are highly dependent upon members of our management, as well as technology and scientific teams, many of whom have been instrumental for us and have substantial experience with developing therapies, identifying potential product candidates and building the technologies related to the development of our Generate Platform and our pipeline. Each of the members of our management team, and all of our employees, including key technical personnel, scientists and clinicians, are employed "at will," meaning we or each officer or employee may terminate the employment relationship at any time. The loss of any of these persons' services may adversely impact the achievement of our research, development, financing and commercialization objectives. We currently do not have "key person" insurance on any of our employees. Many of our key employees, including members of our executive team, have been with us for an several years, and have a significant amount of fully vested stock options or other long-term equity incentives which may become valuable and will be publicly tradable if we become a public company. We may not be able to retain these employees due to the competitive environment in the biotechnology industry, particularly in the greater Boston, Massachusetts region.

In addition, we rely on consultants, contractors and advisors, including scientific and clinical advisors, to assist us in formulating our research and development, regulatory approval and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. The loss of the services of one or more of our current employees or advisors might impede the achievement of our research, development, regulatory approval and commercialization objectives. In addition, we have flexibly added capability and capacity through the use of contractors. We may not be able to retain the services of such personnel, which might result in delays in the operation of our business.

Recruiting and retaining other qualified employees, consultants and advisors for our business, including scientific and technical personnel, also will be critical to our success. Competition for skilled

personnel, including in AI, research, clinical operations, regulatory affairs, therapeutic area management and manufacturing, is intense and the turnover rate can be high. We may not be able to attract and retain personnel on favorable terms given the competition among numerous biotechnology companies and academic institutions for individuals with similar skill sets. In addition, adverse publicity, failure to succeed in preclinical or clinical trials or applications for marketing approval may make it more challenging to recruit and retain qualified personnel. The inability to recruit, or loss of services of certain executives, key employees, consultants or advisors, may impede the progress of our research, development and commercialization objectives and have a material adverse impact on our business, financial condition, results of operations and prospects.

Our information technology systems or our infrastructure may fail or experience security breaches and incidents that could adversely impact our business and operations and subject us to liability.

Our information technology systems and data are vulnerable to compromise or damage from cybersecurity attacks or accidents. We have experienced significant growth in the complexity of our data and the software tools that our hardware infrastructure supports. We rely significantly upon information technology systems and infrastructure owned and maintained by us or by third-party providers to generate, collect, store and transmit confidential and proprietary information and data (including but not limited to intellectual property, proprietary business information and personal information) and to operate our business. We also outsource elements of our operations to, and obtain products and services from, third-parties and engage in collaborations for drug design with third-parties, each of which has or could have access to our confidential or proprietary information. Our employees on occasion travel to countries which are at elevated risk of cyber-intrusion, data theft and expropriation.

We deploy and operate an array of technical and procedural controls to reduce the risks to our information technology ("IT") systems, infrastructure and data and to work to maintain the availability, confidentiality and integrity of our data, and we expect to continue to incur significant costs on such detection and prevention efforts. While we continue to make investments to improve the protection of data and information technology, including in the hiring of qualified IT personnel, periodic cyber security awareness trainings, improvements to IT infrastructure and controls, and conduct regular testing of our systems, there can be no assurance that our efforts will prevent service interruptions or security breaches. Despite these measures, our information technology and other internal infrastructure systems face the risk of failures, interruptions, security breaches and incidents or other harm from various causes or sources, and third-parties with whom we share confidential or proprietary information face similar risks and may experience similar events that materially impact us. These causes or sources include but are not limited to the following:

- service interruptions;
- system malfunctions;
- computer viruses and other malicious code;
- natural disasters and force majeure events;
- global political instability;
- warfare;
- cyber-intrusions by hostile nation-state actors;
- telecommunication and electrical failures;
- inadvertent or intentional actions by our employees or third-party providers; and
- cyber-attacks by malicious third-parties, including the deployment of ransomware and malware, denial-of-service attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information.

With respect to cyber-attacks, the techniques used by cyber criminals change frequently, may not be recognized until launched, and can originate from a wide variety of sources, including outside groups and individuals with a range of motives (including industrial espionage) and expertise, such as organized crime affiliates, terrorist organizations or hostile foreign governments or agencies. These risks may be heightened in connection with geopolitical events such as the conflict between Russia

and Ukraine. The costs to investigate and mitigate actual and suspected cybersecurity breaches and incidents could be significant. We may not be able to anticipate all types of security threats and implement preventive measures effective against all such threats. In addition, an increased amount of work is occurring remotely, including through the use of mobile devices. This could increase our cybersecurity risk, create data accessibility concerns and make us more susceptible to communication disruptions.

We have experienced, and we may continue to experience, cyber-attacks, security breaches and incidents and other system failures, although to our knowledge we have not experienced any material interruption or incident. The loss, corruption, unavailability of or damage to our data would interfere with and undermine the insights we draw from our Generate Platform and could impair the integrity of our clinical trial data, leading to regulatory delays or the inability to get our product candidates approved. If we do not accurately predict and identify our infrastructure requirements and failures and timely enhance our infrastructure, or if our remediation efforts are not successful, it could result in a material disruption of our business operations and development programs, including the loss or unauthorized disclosure of our know-how, individuals' personal information or other proprietary or sensitive data. A security breach or incident that leads to unauthorized acquisition, disclosure or other processing of our intellectual property or other proprietary information could also affect our intellectual property rights and enable competitors to compete with us more effectively.

Likewise, as we rely on third-parties such as CROs, contractors and consultants, including for the manufacture of our product candidates and for the conduct of our clinical trials, similar events relating to their systems and operations could also have a material adverse effect on our business and lead to regulatory agency actions. For example, the loss of clinical trial data from completed, ongoing or future clinical trials could result in delays in or denials of our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Any security compromise affecting us, our collaborators or our industry, whether real or perceived, could harm our reputation, erode confidence in the effectiveness of our security measures, and lead to regulatory scrutiny. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or systems, or inappropriate disclosure of confidential or proprietary or personal information, we could incur liability, our competitive position could be harmed, and the further development and commercialization of our product candidates could be delayed, result in substantial costs and distract management. For more information, see "*—We, our collaboration partners, and our service providers are subject to a variety of stringent and evolving privacy and data security laws, regulations and rules, contractual obligations, industry standards, policies and other obligations related to privacy and data security. Any actual or perceived failure to comply with such obligations could expose us to significant fines or other penalties and otherwise harm our business and operations.*"

Failures, disruptions, security breaches and incidents, cyber-attacks and other harmful events impacting data processed or maintained in our business, or information technology systems or infrastructure used in our business, including those resulting in a loss of or damage to our information technology systems or infrastructure, or the loss of or inappropriate acquisition, disclosure or other processing of confidential, proprietary or personal information, or the perception any of these has occurred, could expose us to a risk of loss, enforcement measures, regulatory agency investigations, proceedings and other actions, penalties, fines, indemnification allegations, litigation, potential civil or criminal liability, collaborators' loss of confidence, damage to our reputation and other consequences, which could materially adversely affect our business and results of operations. While we maintain insurance coverage for certain expenses and liabilities related to failures or breaches of our information technology systems, it may not be adequate to cover all losses associated with such events. In addition, such insurance may not be available to us in the future on satisfactory terms or at all. Furthermore, if the information technology systems of third-parties with whom we do business become subject to disruptions or security breaches or incidents, we may have insufficient recourse against them.

Interruptions in the availability of server systems or communications with internet or cloud-based services, or failure to maintain the security, confidentiality, accessibility or integrity of data stored on such systems, could harm our business.

We rely on third-party data centers and telecommunications solutions, including cloud infrastructure services such as Amazon Web Services, to host substantial portions of our Generate Platform and to support our business operations. We have limited control over these cloud-based service or other third-party providers, although we attempt to reduce risk by minimizing reliance on any single third-party or its operations. We have experienced, and expect we may in the future again experience system interruptions, outages or delays due to a variety of factors, including infrastructure changes, human or software errors, website hosting disruptions and capacity constraints. A prolonged

service disruption affecting our cloud-based solutions could damage our reputation or otherwise materially harm our business.

Further, if the security measures of our third-party data center or cloud infrastructure providers are breached by cyber-attacks or other means and unauthorized access to our information technology systems or data occurs, it could result in interruptions to our operations and the loss of proprietary or confidential information, which could damage our reputation, cause us to incur substantial costs, divert our resources from other tasks and subject us to significant legal and financial exposure and liabilities, any one of which could materially adversely affect our business, results of operations, and prospects. Such third-party providers may also be subject to natural disasters, global political instability, warfare, power losses, telecommunications failures or other disruptive events that could negatively affect our business and require us to incur significant costs to secure alternate cloud-based solutions. In addition, any changes in our third-party providers' service levels or features that we utilize or the termination of our agreements could also adversely affect our business.

Our employees, principal investigators and consultants may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements and insider trading.

We are exposed to the risk of fraud or other misconduct by our employees, principal investigators and consultants. Misconduct by these parties could include intentional failures to comply with FDA regulations or the regulations applicable in the EU and other jurisdictions, provide accurate information to the Regulatory Authorities, comply with healthcare fraud and abuse laws and regulations in the United States and abroad, report financial information or data accurately or disclose unauthorized activities to us. Such misconduct also could involve the improper use of information obtained in the course of clinical trials or interactions with the Regulatory Authorities, which could result in regulatory sanctions and cause serious harm to our reputation. Sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. It is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from government investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, financial condition, results of operations and prospects, including the imposition of significant fines or other sanctions.

Our business could be affected by litigation, government investigations and enforcement actions.

We currently operate and plan to operate in a highly regulated industry and we could now or in the future be subject to litigation, government investigation and enforcement actions on a variety of matters in the U.S. or foreign jurisdictions, including, without limitation, intellectual property, regulatory, product liability, environmental, whistleblower, false claims, privacy, anti-kickback, anti-bribery, securities, commercial, employment and other allegations and legal proceedings which may arise from conducting our business. Any determination that our operations or activities are not in compliance with existing laws or regulations could result in the imposition of fines, civil and criminal penalties, equitable remedies, including disgorgement, injunctive relief and/or other sanctions against us, and remediation of any such findings could have an adverse effect on our business operations.

Legal proceedings, government investigations and enforcement actions can be expensive and time-consuming. An adverse outcome resulting from any such proceedings, investigations or enforcement actions could result in significant damages awards, fines, penalties, exclusion from the federal healthcare programs, healthcare debarment, injunctive relief, product recalls, reputational damage and modifications of our business practices, which could have a material adverse effect on our business and results of operations. Even if such a proceeding, investigation or enforcement action is ultimately decided in our favor, the investigation and defense thereof could require substantial financial and management resources and cause reputational harm.

Employee litigation and unfavorable publicity could negatively affect our future business.

Our employees may, from time to time, bring lawsuits against us regarding injury, creating a hostile workplace, discrimination, wage and hour disputes, sexual harassment or other employment issues. In recent years there has been an increase in the number of discrimination and harassment allegations generally. Coupled with the expansion of social media platforms and similar devices that allow individuals access to a broad audience, these allegations have had a significant negative impact on some businesses. Certain companies that have faced employment- or harassment-related lawsuits have had to terminate management or other key personnel and have suffered reputational harm that has negatively impacted their business. If we were to face any employment-related allegations, our business could be negatively affected.

Our insurance policies are expensive and protect us only from some business risks, which leaves us exposed to significant uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter and insurance coverage is becoming increasingly expensive. We do not know if we will be able to maintain existing insurance with adequate levels of coverage in the future, and any liability insurance coverage we acquire in the future may not be sufficient to reimburse us for any expenses or losses we may suffer. If we obtain marketing approval for any product candidates that we or our collaborators may develop, we intend to acquire insurance coverage to include the sale of commercial products, but we may be unable to obtain such insurance on commercially reasonable terms or in adequate amounts. The coverage or coverage limits currently maintained under our insurance policies may not be adequate. If our losses exceed our insurance coverage, our financial condition would be adversely affected. Clinical trials or regulatory approvals for any of our product candidates could be suspended, which could adversely affect our results of operations and business, including by preventing or limiting the development and commercialization of any product candidates that we or our collaborators may identify. Additionally, operating as a public company has made it more expensive for us to obtain directors and officers liability insurance. If we do not maintain adequate levels of directors' and officers' liability insurance, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors (the "Board") and in our executive team.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business.

We and our current and future CDMOs are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations will involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also may produce hazardous waste products. We generally anticipate contracting with third-parties for the disposal of these materials and wastes. We will not be able to eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from any use by us of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations.

Although we maintain general liability insurance as well as workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort allegations that may be asserted against us in connection with our storage or disposal of biological or hazardous materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Our failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Further, with respect to the operations of our current and any future CDMOs, it is possible that if they fail to operate in compliance with applicable environmental, health and safety laws and regulations or properly dispose of wastes associated with our products, we could be held liable for any resulting damages, suffer reputational harm or experience a disruption in the manufacture and supply of our product candidates. In addition, our supply chain may be adversely impacted if any of our CDMOs become subject to injunctions or other sanctions as a result of their non-compliance with environmental, health and safety laws and regulations.

We or the third-parties upon whom we depend may be adversely affected by natural disasters or other business interruptions such as cybersecurity attacks and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Natural disasters could severely disrupt our operations, and have a material adverse impact on our business, results of operations, financial condition and prospects. If a natural disaster, power outage, cybersecurity attack or other force majeure event occurred that prevented us from using all or a significant portion of our headquarters, damaged critical infrastructure, such as the manufacturing facilities of our CDMOs, limited our ability to access or use our Generate Platform or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have currently are limited and are unlikely to prove adequate in the event of a serious disaster or similar event. Cybersecurity liability insurance is difficult to obtain and may not cover any damages we would sustain based on any breach of our computer security protocols or other cybersecurity attack. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which could have a material adverse impact on our business.

Risks Related to Ownership of Our Common Stock and This Offering

An active trading market for our common stock may not develop.

Prior to this offering, there has been no public market for our common stock. The initial public offering price for our common stock will be determined through negotiations with the underwriters. An active trading market for our shares may never develop or be sustained following this offering. If an active market for our common stock does not develop, it may be difficult for you to sell shares you purchase in this offering without depressing the market price for the shares, or at all. An inactive market may also impair our ability to raise capital by selling shares, which in turn could materially adversely affect our business.

The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock in this offering.

Our stock price is likely to be volatile. The stock market in general, and the market for biotechnology companies in particular, has experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell your common stock at or above the initial public offering price. The market price for our common stock may be influenced by many factors, including: the commencement, enrollment, completion or results of preclinical and clinical trials of our product candidates or those of our competitors; the success of competitive products or technologies; commencement or termination of partnership, collaboration and licensing arrangements; regulatory or legal developments in the United States and other countries; developments or disputes concerning patent applications, issued patents or other proprietary rights; significant lawsuits, including patent or stockholder litigation; the recruitment or departure of key personnel; the level of expenses related to any of our product candidates or clinical development programs; the results of our efforts to discover, develop, acquire or in-license additional product candidates; actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts; variations in our financial results or those of companies that are perceived to be similar to us; changes in the structure of healthcare payment systems; market conditions in the biotechnology and high-tech sectors, including high interest rates and borrowing costs; general economic, industry and market conditions; and the numerous product candidates in our pipeline, the development of which could each generate news or significant adverse events that could impact financial results or recommendations by securities analysts.

If our quarterly or annual results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly or annual fluctuations in our results may, in turn, cause the price of our stock to fluctuate substantially. We believe that period-to-period comparisons of our results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

In the past, following periods of volatility in the market price of a company's securities, securities class-action litigation often has been instituted against that company. Such litigation, if instituted against us, could cause us to incur substantial costs to defend such allegations and divert management's attention and resources, which could seriously harm our business, financial condition, results of operations and prospects.

We may not be able to satisfy listing requirements of Nasdaq or obtain or maintain a listing of our common stock on Nasdaq.

If our common stock is listed on Nasdaq, we must meet certain financial and liquidity criteria to maintain such listing. If we violate Nasdaq's listing requirements, our common stock may be delisted. If we fail to meet any of Nasdaq's listing standards, our common stock may be delisted. In addition, our Board may determine that the cost of maintaining our listing on a national securities exchange outweighs the benefits of such listing. The delisting of our common stock from Nasdaq may materially impair our stockholders' ability to buy and sell our common stock and could have an adverse effect on the market price of, and the efficiency of the trading market for, our common stock. The delisting of our common stock could significantly impair our ability to raise capital and the value of your investment.

Our quarterly and annual operating results may fluctuate in the future. As a result, we may fail to meet or exceed the expectations of research analysts or investors, which could cause our stock price to decline and negatively impact our financing or funding ability, as well as negatively impact our ability to exist as a standalone company.

Our financial condition and operating results have varied in the past and will continue to fluctuate from quarter-to-quarter and year-to-year in the future due to a variety of factors, many of which are beyond our control and may be difficult to predict, including:

- the timing and cost of, and level of investment in, research, development and, if approved, commercialization activities relating to our product candidates, which may change from time to time;
- the timing and status of enrollment for clinical trials;
- the cost of manufacturing our product candidates, as well as building out our supply chain, which may vary depending on the quantity of production and the terms of our agreements with CDMOs;
- expenditures that we may incur to acquire, develop or commercialize additional product candidates and technologies;
- timing and amount of any milestone, royalty or other payments due under any collaboration or license agreement;
- future accounting pronouncements or changes in our accounting policies;
- the timing and success or failure of preclinical studies and clinical trials for our product candidates or competing product candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners;
- the timing of receipt of approvals for our product candidates from regulatory authorities in the United States and internationally;
- exchange rate and interest rate fluctuations;
- coverage and reimbursement policies with respect to our product candidates, if approved, and potential future drugs that compete with our products; and
- the level of demand for our product candidates, if approved, which may vary significantly over time.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. The net losses we incur may fluctuate significantly from quarter-to-quarter and year-to-year, such that a period-to-period comparison of our results of operations may not be a good indication of our future performance. In any particular quarter or quarters, our operating results could be below the expectations of securities analysts or investors, which could cause our stock price to decline.

We believe the nature of our pipeline is not suitable to providing forward-looking guidance on the expected timing of individual product candidate milestones, particularly data readout timing. While as a general matter we intend to periodically report on the status of our development programs, including articulating anticipated next steps in the form of development plans or potential data readouts, we do not currently plan to provide forward-looking guidance on the timing of those next steps. In addition, we do not control the timing of disclosure of any such milestones related to certain of our product

candidates that are managed by our collaboration partners, including Amgen and Novartis. Any disclosure by our collaboration partners of data that is perceived as negative, whether or not such data is related to other data that we or others release, may have a material adverse impact on our stock price or overall valuation. Not providing forward-looking guidance on the expected timing of product candidate milestones may lead to speculation by investors, shareholders, analysts and other market participants and in the media as to the progress of our individual product candidates, or our product candidates as a whole, which may have a material adverse impact on our stock price or valuation.

A significant portion of our total outstanding shares of our common stock after this offering will be restricted from immediate resale but may be sold into the market in the near future. The substantial number of shares eligible for public sale or subject to rights requiring us to register them for public sale could cause the market price of our common stock to drop significantly, even if our business is performing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time, subject to certain restrictions described below. These sales, or the perception in the market that holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. Based on shares of our common stock outstanding as of December 31, 2025, we will have shares of our common stock outstanding after this offering (or shares of common stock if the underwriters exercise their option to purchase additional shares in full).

In connection with our initial public offering, we, all of our directors and officers and the holders of all of our capital stock and securities convertible into or exchangeable for our capital stock have entered into lock-up agreements with the underwriters and/or are subject to market standoff agreements or other agreements with us under which we and they agreed, subject to specific exceptions, not to sell any of our stock for at least 180 days following the date of our initial public offering.

Upon completion of this offering, stockholders owning an aggregate of up to approximately million shares will be entitled, under contracts providing for registration rights, to require us to register shares owned by them for public sale in the United States. We also intend to file one or more registration statements on Form S-8 under the Securities Act of 1933 ("Securities Act") to register all shares of common stock issued or issuable under our equity plans. Any such Form S-8 registration statements will automatically become effective upon filing. Accordingly, shares registered under such registration statements will be available for sale in the open market following the expiration of the applicable lock-up period. See the section titled "*Shares Eligible for Future Sale*" appearing elsewhere in this prospectus for a more detailed description of the restrictions on selling shares of our common stock.

Additionally, after this offering, the holders of an aggregate of shares of our common stock, or their transferees, will have rights, subject to some conditions, to require us to file one or more registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. If we were to register the resale of these shares, they could be sold freely in the public market. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Sales of our shares as restrictions end or pursuant to registration rights may make it more difficult for us to finance our operations through the sale of equity securities in the future at a time and at a price that we deem appropriate. These sales also could cause the trading price of our common stock to fall and make it more difficult for you to sell shares of our common stock.

If you purchase our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares.

You will suffer immediate and substantial dilution in the net tangible book value of our common stock if you purchase in this offering. Assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after giving effect to this offering, purchasers of common stock in this offering will experience immediate dilution of $ per share in net tangible book value of our common shares. In addition, after giving effect to this offering, investors purchasing common stock in this offering will contribute % of the total amount invested by stockholders since inception but will only own % of the common stock outstanding. In the past, we issued options and other securities to acquire common stock at prices significantly below the initial public offering price. To the extent these outstanding securities are ultimately exercised, investors purchasing common stock in this offering will sustain further dilution.

See the section titled "*Dilution*" appearing elsewhere in this prospectus for a more detailed description of the dilution to new investors in the offering.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our technologies or product candidates.

We may seek additional capital through public or private equity or debt financings, government or other third-party grants, asset sales, royalty financings, partnership, collaboration and licensing arrangements, or a combination of these approaches. To the extent that we raise additional capital through the sale of stock or convertible or exchangeable debt securities, warrants or other similar equity securities, your ownership interest could be diluted and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. The incurrence of indebtedness would result in increased fixed payment obligations and could involve restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. If we raise additional funds through collaborations and alliances and licensing arrangements with third-parties or through asset sales, we may have to relinquish valuable rights to our technologies or product candidates or grant licenses on terms unfavorable to us.

If securities analysts do not publish research or reports about our business or if they publish negative evaluations of our stock, the price of our stock could decline.

The trading market for our common stock will rely, in part, on the research and reports that industry or financial analysts publish about us or our business. We do not currently have, and may never obtain, research coverage by industry or financial analysts. If no, or few, analysts commence coverage of us, the trading price of our stock may decrease. Even if we do obtain analyst coverage, if one or more of the analysts covering our business downgrade their evaluations of our stock, the price of our stock could decline. If one or more of these analysts cease to cover our stock, we could lose visibility in the market for our stock, which in turn could cause our stock price to decline.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Our executive officers, directors, five percent stockholders and their affiliates beneficially own approximately % of our common stock and, upon closing of this offering, that same group will beneficially own approximately % of our outstanding common stock (assuming no exercise of the underwriters' option to purchase additional shares and no exercise of outstanding options and without giving effect to (i) any potential purchases by such persons in this offering or (ii) issuance of options to be granted to certain of our employees and non-employee directors upon pricing of this offering). Therefore, even after this offering, these stockholders will have the ability to influence us through their ownership positions. For example, these stockholders, acting together, may be able to exert significant influence over matters such as elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may believe are in your best interest as one of our stockholders.

Some of these persons or entities may have interests different than yours. For example, because many of these stockholders purchased their shares at prices substantially below the current market price of our common stock and have held their shares for a longer period, they may be more interested in selling our company to an acquirer than other investors, or they may want us to pursue strategies that deviate from the interests of other stockholders.

Participation in this offering by our existing stockholders and their affiliated entities may reduce the public float for our common stock.

To the extent certain of our existing stockholders and their affiliated entities participate in this offering, such purchases would reduce the non-affiliate public float of our shares, meaning the number of shares of our common stock that are not held by officers, directors and principal stockholders. A reduction in the public float could reduce the number of shares that are available to be traded at any given time, thereby adversely impacting the liquidity of our common stock and depressing the price at which you may be able to sell shares of common stock purchased in this offering.

We have broad discretion in the use of our cash, cash equivalents, restricted cash and marketable securities, including the net proceeds from this offering, and may not use them effectively.

Our management will have broad discretion in the application of our cash, cash equivalents, restricted cash and marketable securities, including the net proceeds from this offering, and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse impact on our business, cause the price of our common stock to decline, and delay the development of our product candidates. Pending their use, we may invest our cash, cash equivalents, restricted cash and marketable securities, including the net proceeds from this offering, in a manner that does not produce income or that loses value. See the section titled "*Use of Proceeds*" appearing elsewhere in this prospectus.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws, as well as provisions of Delaware law, could make it more difficult for a third-party to acquire us or increase the cost of acquiring us, even if doing so would benefit our stockholders or remove our current management.

Provisions in our fourth amended and restated certificate of incorporation (the "amended and restated certificate of incorporation") and amended and restated bylaws (the "amended and restated bylaws"), which will be in effect immediately prior to the consummation of this offering, may significantly reduce the value of our shares to a potential acquiror or make it difficult for a third-party to acquire, or attempt to acquire, control of our company, even if a change of control was considered favorable by you and other stockholders. For example, our Board will have the authority to issue up to shares of preferred stock and may fix the price, rights, preferences, privileges and restrictions of the preferred stock without any further vote or action by our stockholders. The issuance of shares of preferred stock may delay or prevent a change of control transaction. As a result, the market price of our common stock and the voting and other rights of our stockholders may be adversely affected. The issuance of shares of preferred stock may result in the loss of voting control to other stockholders.

Our amended and restated certificate of incorporation and amended and restated bylaws will also contain other provisions that could have an anti-takeover effect, including:

- only one of our classes of directors will be elected each year;
- stockholders will not be entitled to remove directors other than by a % vote and only for cause;
- stockholders will not be permitted to take actions by written consent;
- stockholders cannot call a special meeting of stockholders; and
- stockholders must give advance notice to nominate directors or submit proposals for consideration at stockholder meetings.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law (the "DGCL"), which regulates corporate acquisitions by prohibiting Delaware corporations from engaging in specified business combinations with particular stockholders of those companies. These provisions could discourage potential acquisition proposals and could delay or prevent a change of control transaction. They could also have the effect of discouraging others from making tender offers for our common stock, including transactions that may be in your best interests. These provisions may also prevent changes in our management or limit the price that investors are willing to pay for our stock.

Any provision of our amended and restated certificate of incorporation or amended and restated bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

We do not currently intend to declare or pay cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our

business. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

Our amended and restated bylaws will designate the Court of Chancery of the State of Delaware or the United States District Court for the District of Massachusetts as the exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us.

Our amended and restated bylaws, which will be in effect immediately prior to the consummation of this offering, provide that, unless we consent in writing to an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for any state law claims for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of, or a claim based on, fiduciary duty owed by any of our current or former directors, officers and employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws (including the interpretation, validity or enforceability thereof) or (iv) any action asserting a claim that is governed by the internal affairs doctrine, in each case subject to the Court of Chancery of the State of Delaware having personal jurisdiction over the indispensable parties named as defendants therein (the "Delaware Forum Provision"). The Delaware Forum Provision will not apply to any causes of action arising under the Securities Act or the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our amended and restated bylaws further provide that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the U.S. shall be the sole and exclusive forum for resolving any complaint asserting a cause or causes of action arising under the Securities Act (the "Federal Forum Provision"). In addition, our amended and restated bylaws provide that any person or entity purchasing or otherwise acquiring any interest in shares of our common stock is deemed to have notice of and consented to the foregoing provisions; provided, however, that stockholders cannot and will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

The Delaware Forum Provision and the Federal Forum Provision in our amended and restated bylaws may impose additional litigation costs on stockholders in pursuing any such claims. Additionally, the forum selection clauses in our amended and restated bylaws may limit our stockholders' ability to bring a claim in a forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage such lawsuits against us and our directors, officers and employees even though an action, if successful, might benefit our stockholders. In addition, while the Delaware Supreme Court ruled in March 2020 that federal forum selection provisions purporting to require claims under the Securities Act be brought in federal court were "facially valid" under Delaware law, there is uncertainty as to whether other courts will enforce our Federal Forum Provision. If the Federal Forum Provision is found to be unenforceable, we may incur additional costs associated with resolving such matters. The Federal Forum Provision may also impose additional litigation costs on stockholders who assert that the provision is not enforceable or invalid. The Court of Chancery of the State of Delaware and the federal district courts of the U.S. may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than our stockholders.

General Risk Factors

We will incur increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives. We will be subject to financial reporting and other requirements for which our accounting and other management systems and resources may not be adequately prepared.

As a public company, and particularly after we are no longer an "emerging growth company," we will incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, the federal securities laws, including the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act") and rules subsequently implemented by the SEC and Nasdaq have imposed various requirements on public companies, including requirements to file annual, quarterly and event driven reports with respect to our business and financial condition, and to establish and maintain effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some

activities more time-consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance. We may not be able to produce reliable financial statements or file these financial statements as part of a periodic report in a timely manner with the SEC or comply with the Nasdaq listing requirements. In addition, we could make errors in our financial statements that could require us to restate our financial statements.

We are an "emerging growth company," and the reduced disclosure requirements applicable to emerging growth companies may make our common stock less attractive to investors.

We are an "emerging growth company" ("EGC"), as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). We will remain an EGC until the earlier of: (i) the last day of the fiscal year in which we have total annual gross revenues of $1.235 billion or more; (ii) the last day of the fiscal year following the fifth anniversary of the date of the completion of this offering; (iii) the date on which we have issued more than $1.0 billion in non-convertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the SEC, which means the first day of the year following the first year in which the market value of our common stock that is held by non-affiliates exceeds $700 million. For so long as we remain an EGC, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include: not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002 ("Section 404"); not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements; reduced disclosure obligations regarding executive compensation; and exemptions from the requirements of holding a non-binding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We may choose to take advantage of some, but not all, of the available exemptions. We have taken advantage of reduced reporting burdens in this prospectus. In particular, we have not included all of the executive compensation information that would be required if we were not an EGC. We cannot predict whether investors will find our common stock less attractive if we rely on certain or all of these exemptions. If some investors find our common stock less attractive, as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

In addition, the JOBS Act provides that an EGC may take advantage of an extended transition period for complying with new or revised accounting standards. This allows an EGC to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption and, therefore, while we are an EGC we will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not EGCs.

If we fail to establish and maintain proper and effective internal control over financial reporting, our operating results and our ability to operate our business could be harmed.

Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles. In connection with this offering, we intend to begin the process of documenting, reviewing and improving our internal controls and procedures for compliance with Section 404, which will require annual management assessment of the effectiveness of our internal control over financial reporting starting with our second filing of an Annual Report on Form 10-K.

Implementing any appropriate changes to our internal controls may distract our officers and employees, entail substantial costs to modify our existing processes and take significant time to complete. These changes may not, however, be effective in maintaining the adequacy of our internal controls, and any failure to maintain that adequacy or consequent inability to produce accurate financial statements on a timely basis could increase our operating costs and harm our business. In addition, investors' perceptions that our internal controls are inadequate or that we are unable to produce accurate financial statements on a timely basis cause investors to lose confidence in the accuracy and completeness of our financial reports and could cause the market price of our common stock to decline significantly.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

Upon the closing of this offering, we will become subject to the periodic reporting requirements of the Exchange Act. We designed our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the facts that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

Our future ability to utilize our NOL carryforwards and certain other tax attributes may be limited.

Since our inception, we have incurred losses and we may never achieve profitability. As of December 31, 2025, we had U.S. federal NOL carryforwards of $ million (which are not subject to expiration) and state NOL carryforwards of $ million (which begin to expire in various amounts in), and $ million of research credit carryforwards for state income tax purposes (which do not expire and can be carried forward indefinitely). To the extent that we continue to generate taxable losses, under current law, our unused U.S. federal NOLs may be carried forward to offset a portion of future taxable income, if any. Additionally, we continue to generate business tax credits, including research and development tax credits, which generally may be carried forward to offset a portion of future taxable income, if any, subject to expiration of such credit carryforwards. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the "Code"), if a corporation undergoes an "ownership change," generally defined as one or more shareholders or groups of shareholders who own at least five percent of the corporation's equity increasing their equity ownership in the aggregate by more than 50 percentage points (by value) over a three-year period, the corporation's ability to use its pre-change NOLs and other pre-change tax attributes (such as research and development tax credits) to offset its post-change income or taxes may be limited. Similar rules may apply under state tax laws. Our prior equity offerings and other changes in our stock ownership have resulted in such ownership changes in the past and on December 31, 2024, we recorded a $ valuation allowance against deferred tax assets to reflect tax assets which may not be fully realized as a result of such ownership changes. In addition, we may experience ownership changes in the future as a result of this offering or subsequent shifts in our stock ownership, some of which are outside of our control. As a result, if we earn net taxable income, our ability to use our pre-change NOLs or other pre-change tax attributes to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us. There is a risk that due to changes under the tax law, regulatory changes or other unforeseen reasons, our existing NOLs or business tax credits could expire or otherwise be unavailable to offset future income tax liabilities. At the state level, there may also be periods during which the use of NOLs or business tax credits is suspended or otherwise limited, which could accelerate or permanently increase state taxes. For these reasons, we may not be able to realize a tax benefit from the use of our NOLs or tax credits, even if we attain profitability.

Changes in tax laws or in their implementation or interpretation may adversely affect our business and financial condition.

The rules dealing with U.S. federal, state and local income taxation are constantly under review by persons involved in the legislative process and by the Internal Revenue Service and the U.S. Treasury Department. Changes to tax laws (which changes may have retroactive application) could adversely affect our business and our financial condition. In recent years, many such changes have been made and changes are likely to continue to occur in the future. We cannot predict whether, when, in what form or with what effective dates, tax laws, regulations and rulings may be enacted, promulgated or decided or whether they could increase our tax liability or require changes in the manner in which we operate in order to minimize increases in our tax liability.

We, our collaboration partners, and our service providers are subject to a variety of stringent and evolving privacy and data security laws, regulations and rules, contractual obligations, industry standards, policies and other obligations related to privacy and data security. Any

actual or perceived failure to comply with such obligations could expose us to significant fines or other penalties and otherwise harm our business and operations.

In the ordinary course of our business, we and the third-parties upon which we rely collect, receive, store or otherwise process personal data, including information we may collect about participants in our clinical trials. Our data processing activities subject us to numerous, evolving privacy and data security obligations, such as various laws, regulations, guidance, industry standards, external and internal privacy and security policies, contractual requirements and other obligations relating to privacy and data security.

The legislative and regulatory framework for the processing of personal data worldwide is rapidly evolving in a manner that is increasingly stringent and, globally, this legal and regulatory framework is likely to remain uncertain for the foreseeable future. We must devote significant resources to understanding and complying with the changing landscape in this area. Each law is also subject to various interpretations by courts and Regulatory Authorities, creating additional uncertainty, and we may fail to comply with the evolving data protection laws, which may expose us to risk of enforcement actions taken by authorities, private rights of action in some jurisdictions and potential significant penalties if we are found to be non-compliant. Some of these laws and regulations also carry the possibility of criminal sanctions.

In the United States, numerous federal, state and local laws and regulations, including federal health information privacy laws, state information security and data breach notification laws, federal consumer protection laws (*e.g.*, Section 5 of the Federal Trade Commission Act), state consumer protection and privacy laws and other similar laws (*e.g.*, wiretapping and communications interception laws) govern the processing of health-related and other personal data. At the state level, numerous U.S. states have enacted comprehensive privacy laws that impose certain obligations on covered businesses, including providing specific disclosures in privacy notices and affording individuals certain rights concerning their personal data. Similar laws are being considered in several other states, as well as at the federal and local levels, and we expect more states to pass similar laws in the future. While existing state comprehensive privacy laws exempt some data processed in the context of clinical trials, these developments may further complicate compliance efforts and increase legal risk and compliance costs for us and the third-parties upon whom we rely.

Additionally, we may be subject to new laws governing the privacy of consumer health data. These various privacy and data security laws may impact our business activities, including our identification of research subjects, relationships with business partners and ultimately the marketing and distribution of our products. Regulators and legislators in the U.S. are increasingly scrutinizing and restricting certain personal data transfers and transactions involving foreign countries. For example, the Biden Administration's executive order Preventing Access to Americans' Bulk Sensitive Personal Data and United States Government-Related Data by Countries of Concern as implemented by the Department of Justice's final rule issued in December 2024, effective April 8, 2025, prohibits data brokerage transactions involving certain sensitive personal data categories, including health data, genetic data and biospecimens, to certain countries of concern, including China. The final rule also restricts certain investment agreements, employment agreements and vendor agreements involving such data and countries of concern, absent specified cybersecurity controls. The final rule does not exempt key-coded or otherwise anonymized, pseudonymized, de-identified or encrypted data. Actual or alleged violations of the final rule may be punishable by criminal and/or civil sanctions and may result in exclusion from participation in federal and state programs.

Outside the United States, an increasing number of laws, regulations and industry standards may govern privacy, data security and the transfer of personal data between jurisdictions. For example, the European Union's General Data Protection Regulation ("EU GDPR") and the United Kingdom's General Data Protection Regulation ("UK GDPR" and, together with the EU GDPR, "GDPR") impose strict requirements for processing personal data including relating to processing of sensitive data (such as health data), ensuring there is a legal basis or condition to justify the processing of personal data, where required requirements relating to obtaining consent of individuals, disclosures about how personal data is to be used, limitations on retention of information, implementing safeguards to protect the security and confidentiality of personal data, where required providing notification of data breaches, maintaining records of processing activities and documenting data protection impact assessments where there is high risk processing and taking certain measures when engaging third-party processors. Under GDPR, companies may face temporary or definitive bans on data processing and other corrective activities, fines of up to €20 million (£17.5 million GBP) or 4% of annual global revenues, whichever is greater, and private litigation related to processing of personal data brought by classes of data subjects or consumer protection organizations authorized at law to represent their interests.

Non-compliance could also result in a material adverse effect on our business, financial position and results of operations.

In addition, we may be unable to transfer personal data from Europe and other jurisdictions to the United States or other countries due to data localization requirements or limitations on cross-border data flows. Europe and other jurisdictions have enacted laws requiring data to be localized or limiting the transfer of personal data to other countries. In particular, the European Economic Area ("EEA") and the UK have significantly restricted the transfer of personal data to the United States and other countries. Other jurisdictions may adopt similarly stringent interpretations of their data localization and cross-border data transfer laws. Although there are currently various mechanisms that may be used to transfer personal data from the EEA and UK to the United States in compliance with law, such as the EEA's standard contractual clauses, the UK's International Data Transfer Agreement / Addendum and the EU-U.S. Data Privacy Framework ("Framework") and the UK extension thereto (which allows for transfers to relevant U.S.-based organizations who self-certify compliance and participate in the Framework), these mechanisms are subject to legal challenges, and there is no assurance that we can satisfy or rely on these measures to lawfully transfer personal data to the United States. If there is no lawful manner for us to transfer personal data from the EEA, the UK or other jurisdictions to the United States (or other countries), or if the requirements for a legally-compliant transfer are too onerous, we could face significant adverse consequences, including the interruption or degradation of our operations, the need to relocate part of or all of our business or data processing activities to other jurisdictions (such as Europe) at significant expense, increased exposure to regulatory actions, substantial fines and penalties, the inability to transfer data and work with partners, vendors and other third-parties and injunctions against our processing or transferring of personal data necessary to operate our business. Additionally, companies that transfer personal data out of the EEA and UK to other jurisdictions, particularly to the United States, are subject to increased scrutiny from regulators, individual litigants and activities activist groups. Some European regulators have ordered certain companies to suspend or permanently cease certain transfers of personal data out of Europe for allegedly violating the GDPR's cross-border data transfer limitations.

Although the UK is regarded as a third country under the EU GDPR, the European Commission has adopted an adequacy decision in favor of the UK, a decision recognizing the UK as providing adequate protection under the EU GDPR and enabling data transfers from Member States to the UK without additional safeguards. However, the UK adequacy decision will automatically expire in December 2025 unless the European Commission re-assesses and renews or extends that decision and remains under review by the Commission during this period. The EU GDPR and the UK GDPR currently impose substantially similar obligations. However, it is possible that the respective provisions, interpretations and enforcement of the EU GDPR and U.K. GDPR may further diverge in the future and create additional regulatory challenges and uncertainties. In October 2024, the UK Government introduced its Data Use and Access Bill ("UK Bill") into the UK legislative process. If passed, the final version of the UK Bill will have the effect of further altering the similarities between the UK and EEA data protection regime and threaten the UK adequacy decision from the European Commission. This may lead to additional compliance costs and could increase our overall risk.

Additionally in the EEA, the NIS 2 Directive ("NIS 2") is replacing the cybersecurity legal framework under the current NIS framework, aiming to ensure a high level of cybersecurity in the region. NIS 2 brings new medium and large organizations providing services in the EEA within scope of the legal framework. It extends to additional sectors and expands the list of in-scope healthcare organizations, including to certain providers engaged in research and development of medicinal products. The new regime imposes direct obligations on management in respect of an in-scope organization's compliance with NIS 2, requires covered organizations to put in place certain cyber risk management measures, strengthens incident reporting requirements and provides supervisory authorities with greater oversight. The majority of obligations will come into force when national legislation implementing NIS 2 becomes effective in the relevant Member State. Member States had until October 17, 2024 to transpose NIS 2 into national legislation, although many countries have still not completed the transposition. As such, the cybersecurity regulatory landscape in the EEA is currently fragmented and uncertain. To the extent we are subject to NIS 2, we will require additional investment of our resources in compliance programs. Under NIS 2 companies may be subject to administrative fines of up to the higher amount of €10 million or 2% of worldwide turnover.

In addition to privacy and data security laws, we are contractually subject to industry standards adopted by industry groups and may become subject to such obligations in the future. We are also bound by other contractual obligations related to privacy and data security, and our efforts to comply with such obligations may not be successful. We publish privacy policies and other statements, such as compliance with certain certifications or self-regulatory principles, regarding privacy and data security. If these policies, materials or statements are found to be deficient, lacking in transparency, deceptive,

unfair or misrepresentative of our practices, we may be subject to investigation, enforcement actions by regulators or other adverse consequences.

Obligations related to privacy and data security are quickly changing, becoming increasingly stringent, and creating uncertainty. Additionally, these obligations may be subject to differing applications and interpretations, which may be inconsistent or conflict among jurisdictions. Preparing for and complying with these obligations requires us to devote significant resources and may necessitate changes to our services, information technologies, systems and practices and to those of any third-parties that process personal data on our behalf.

We may at times fail in our efforts to comply with our privacy and data security obligations. Moreover, despite our efforts, our personnel or third-parties on whom we rely, including CROs supporting our clinical trials, clinical trial sites with whom we have contracted and other third-parties supporting our clinical trials, may fail to comply with such obligations, which could negatively impact our business operations. If we or the third-parties on which we rely fail, or are perceived to have failed, to address or comply with applicable privacy and data security obligations, we could face significant consequences, including but not limited to: government enforcement actions (*e.g.*, investigations, fines, penalties, audits, inspections and similar); litigation (including class-action claims), and mass arbitration demands; additional reporting requirements and/or oversight; bans on processing personal data; and orders to destroy or not use personal data. In particular, plaintiffs have become increasingly more active in bringing privacy-related claims against companies, including class claims and mass arbitration demands. Some of these claims allow for the recovery of statutory damages on a per violation basis, and, if viable, carry the potential for significant statutory damages, depending on the volume of data and the number of violations. Any of these events could have a material adverse effect on our reputation, business, financial condition, results of operations and growth prospects, including but not limited to: loss of customers; interruptions or stoppages in our business operations (including, as relevant, clinical trials); inability to process personal data or to operate in certain jurisdictions; limited ability to develop or commercialize our products; expenditure of time and resources to defend any claim or inquiry; adverse publicity; or substantial changes to our business model or operations.

Unfavorable U.S. or global economic conditions could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and financial markets. The global economy and financial markets have experienced extreme volatility and disruptions, including severely diminished liquidity and credit availability, declines in consumer confidence, rising inflation, uncertainty from changes in tariff policies, fluctuating interest rates, declines in economic growth, global supply chain disruptions and uncertainty about economic stability. The global economy and financial markets may also be adversely affected by the current or anticipated impact of military conflict, terrorism or other geopolitical events, including the ongoing war in Ukraine, the Israel-Gaza conflict and the increasingly strained relationship between the U.S. and China. Sanctions imposed by the U.S. and other countries in response to such conflicts may adversely impact the financial markets and the global economy, and the economic countermeasures by the affected countries or others could exacerbate market and economic instability.

There can be no assurance that further deterioration in credit and financial markets and confidence in economic conditions will not occur. A severe or prolonged economic downturn could result in a variety of risks to our business, including weakened demand for any product candidates or products we may develop and our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption. If the equity and credit markets deteriorate, it may make any necessary equity or debt financing more difficult, more costly and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could impair our ability to achieve our growth strategy, could harm our financial performance and stock price and could require us to delay or abandon clinical development plans. In addition, there is a risk that our current or future service providers, manufacturers or other collaborators may not survive such difficult economic times, which could directly affect our ability to attain our operating goals on schedule and on budget. We cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled "*Prospectus Summary*," "*Risk Factors*," "*Management's Discussion and Analysis of Financial Condition and Results of Operations*," and "*Business*," contains express or implied forward-looking statements that are based on our management's belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to future events or our future operational or financial performance, and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Forward-looking statements in this prospectus include, but are not limited to, statements about:

- the initiation, timing, progress and results of our research and development programs, preclinical studies and clinical trials;
- the ability of clinical trials to demonstrate safety and efficacy of our product candidates, and other positive results, and the ability of our preclinical studies and earlier clinical trials to predict later clinical trial results;
- the timing, scope and likelihood of regulatory filings and approvals of our product candidates;
- the implementation of our business model, and strategic plans for our business, programs, and current and future product candidates;
- our ability to effectively use AI in our drug discovery and development process, and to maintain and improve our Generate Platform;
- the acceptance of AI in the biotechnology industry, including market acceptance of products and product candidates discovered and developed using AI;
- our ability to obtain additional cash and the sufficiency of our existing cash, cash equivalents and marketable securities to fund our future operating expenses and capital expenditure requirements;
- the accuracy of our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets;
- our potential and ability to successfully manufacture and supply our current and future product candidates for clinical trials and for commercial use, if approved;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates;
- developments relating to our competitors and our industry, including competing product candidates and therapies;
- existing regulations and regulatory developments in the U.S. and other jurisdictions;
- expectations regarding future events under collaboration and licensing agreements, including potential future payments, as well as our plans and strategies for entering into further collaboration and licensing agreements;
- general economic, industry and market conditions, including fluctuating interest rates and rising inflation;
- our ability to attract and retain the continued service of our key personnel and to identify, hire and then retain additional qualified personnel;
- our expectations regarding the period during which we will qualify as an emerging growth company under the JOBS Act; and
- our anticipated use of our existing cash, cash equivalents and marketable securities and the proceeds from this offering.

In some cases, forward-looking statements can be identified by terminology such as “may,” “should,” “expects,” “intends,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue,” or the negative of these terms or other comparable terminology. These statements are only predictions. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which are, in some cases, beyond our control and which could materially affect results. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under the section entitled “*Risk Factors*” and elsewhere in this prospectus. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this prospectus and the documents that we reference in this prospectus and have filed with the SEC as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements.

The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain, and you are cautioned not to unduly rely upon these statements.

Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein until after we distribute this prospectus, whether as a result of any new information, future events or otherwise. You should therefore not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third-parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We are responsible for all of the disclosure contained in this prospectus, and we believe that these sources are reliable; however, we have not independently verified the information contained in such publications.

USE OF PROCEEDS

We estimate that our net proceeds from the sale of shares of our common stock in this offering will be approximately $ million, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise in full their option to purchase additional shares, our estimated net proceeds will be approximately $ million.

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) our net proceeds from this offering by $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. A 1.0 million share increase (decrease) in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) our net proceeds from this offering by $ million, assuming no change in the assumed initial public offering price per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The information discussed above is illustrative only and will adjust based on the actual initial public offering price and other terms of this offering determined at pricing.

The principal purposes of this offering are to create a public market for our common stock and thereby facilitate future access to the public equity markets, increase our visibility in the marketplace and obtain additional capital. We currently intend to use the net proceeds from this offering for the following:

- approximately million to advance GB-0895 through the completion of our two Phase 3 trials in severe asthma;
- approximately million to complete our ongoing Phase 1b clinical trial of GB-0895 for the treatment of COPD and to initiate the next phase of clinical development (pending results from our Phase 1b trial in COPD and regulatory alignment);
- approximately million to fund platform and technology innovation and engineer multiple programs and product candidates through development candidate nomination and into IND-enabling activities;
- approximately million to advance GB-4362 and GB-5267 through topline Phase 1 data; and
- and the remainder for additional research and development efforts for new programs and product candidates, as well as for working capital and other general corporate purposes.

Our expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering or the amounts that we will actually spend on the uses set forth above and we expect that we will require additional funds in order to fully accomplish the specified uses of the proceeds of this offering. We may also use a portion of the net proceeds to in-license, acquire or invest in complementary businesses or technologies to continue to build our pipeline, research and development capabilities and our intellectual property position, although we currently have no agreements, commitments or understandings with respect to any such transaction.

Due to the many inherent uncertainties in the development of our programs and product candidates, the amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our research and development, the timing of patient enrollment and evolving regulatory requirements, the timing and success of preclinical studies, our ongoing or future clinical trials, the timing of regulatory submissions, any strategic alliances that we may enter into with third-parties for our investigational medicines or strategic opportunities that become available to us, and other factors described in "*Risk Factors*" in this prospectus, as well as the amount of cash used in our operations and any unforeseen cash needs.

We believe, based on our current operating plan, that the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, will be sufficient to fund our operations through . We have based this estimate on our current assumptions, which may prove to be wrong, and we may exhaust our available capital resources sooner than we expect.

Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation instruments, including short-term and long-term interest-bearing instruments, investment-grade securities, and direct or guaranteed obligations of the U.S. government. We cannot predict whether the proceeds invested will yield a favorable return. Our management will retain broad discretion in the application of the net proceeds we receive from our initial public offering, and investors will be relying on the judgment of our management regarding the application of the net proceeds.

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings to fund the growth and development of our business. We do not intend to declare or pay cash dividends to our stockholders in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our Board and will depend on our financial condition, operating results, capital requirements, general business conditions, and other factors that our Board may deem relevant.

In addition, our ability to pay cash dividends on our capital stock in the future may be limited by the terms of any future debt or preferred securities we issue or any credit facilities we enter into.

CAPITALIZATION

The following table sets forth our cash, cash equivalents, restricted cash and marketable securities and total capitalization as of December 31, 2025:

- on an actual basis;
- on a pro forma basis, giving effect to (i) the automatic conversion of all outstanding shares of preferred stock into an aggregate of shares of common stock and the related automatic adjustment of the preferred stock warrant into a common stock warrant immediately prior to the completion of this offering and (ii) the filing and effectiveness of our amended and restated certificate of incorporation, which will occur immediately prior to the completion of this offering; and
- on a pro forma as adjusted basis, giving effect to (i) the pro forma adjustments set forth above and (ii) the issuance and sale of shares of common stock in this offering at the assumed initial public offering price of $ per share, the midpoint of the estimated offering price range listed on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma as adjusted information below is illustrative only, and our capitalization following the completion of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing.

The following table should be read together with "*Management's Discussion and Analysis of Financial Condition and Results of Operations*," "*Description of Capital Stock*," and the consolidated financial statements and related notes appearing elsewhere in this prospectus.

	As of December 31, 2025		
(in thousands, except share and per share data)	**Actual**	**Pro Forma**	**Pro Forma As Adjusted(1)**
Cash, cash equivalents, restricted cash and marketable securities	$	$	$
Convertible preferred stock (Series A, B and C), par value $0.001 per share; shares authorized, issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	$	$ —	$ —
Non-controlling interest			
Stockholders' (deficit) equity:			
Preferred stock, par value $0.001 per share; no shares authorized, issued or outstanding, actual; and shares authorized and no shares issued or outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, par value $0.001 per share; shares authorized, shares issued and outstanding, actual; shares authorized, shares issued and outstanding, pro forma; shares authorized, shares issued and outstanding, pro forma as adjusted			
Additional paid-in capital			
Accumulated other comprehensive loss			
Accumulated deficit			
Total stockholders' (deficit) equity			
Total capitalization	$	$	$

(1) Each $1.00 increase or decrease, as applicable, in the assumed initial public offering price of $ per share, the midpoint of the estimated offering price range listed on the cover page of this prospectus for this offering, would increase or decrease, as applicable, the pro forma as adjusted amount of each of cash, cash equivalents and marketable securities, additional paid-in capital, total stockholders' equity and total capitalization by $ million, assuming that the number of shares offered by us in this offering remains the same and after deducting estimated underwriting

discounts and commissions, placement agent fees and estimated offering expenses payable by us. Similarly, each increase or decrease, as applicable, of 1.0 million shares in the number of shares of common stock offered by us at the assumed initial public offering price per share, the midpoint of the estimated offering price range listed on the cover page of this prospectus in this offering, would increase or decrease, as applicable, the pro forma as adjusted amount of each of cash, cash equivalents and marketable securities, additional paid-in capital, total stockholders' equity and total capitalization by $ million, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The number of shares of common stock that will be outstanding after this offering on a pro forma and pro forma as adjusted basis is based on shares of common stock (which includes shares of restricted common stock) outstanding as of December 31, 2025 after giving effect to the automatic conversion of all outstanding shares of our preferred stock into the aggregate of shares of common stock immediately prior to the completion of this offering, and excludes:

- shares of common stock issuable upon exercise of outstanding stock options as of December 31, 2025 under our 2019 Plan, with a weighted average exercise price of $ per share;
- shares of common stock issuable upon exercise of outstanding stock options granted after December 31, 2025 under our 2019 Plan, with a weighted average exercise price of $ per share;
- shares of common stock reserved for future issuance as of December 31, 2025 under the 2019 Plan, which will cease to be available for issuance at the time that our 2026 Plan becomes effective;
- shares of our common stock issuable upon exercise of an outstanding warrant to purchase Series A preferred stock that will become a warrant to purchase common stock immediately prior to the completion of this offering, with an exercise price of $ per share;
- shares of our common stock reserved for future issuance under our 2026 Plan, which will become effective on the date immediately prior to the effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2026 Plan and any shares underlying outstanding stock awards granted under the 2019 Plan that expire or are repurchased, forfeited, cancelled or withheld; and
- shares of common stock reserved for future issuance under our ESPP, which will become effective on the date immediately prior to the effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the ESPP.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

Our historical net tangible book value as of was a deficit of $ million, or $ per share of our common stock. Our historical net tangible book value (deficit) represents the amount of our total tangible assets less our total liabilities and preferred stock. Historical net tangible book value per share represents historical net tangible book value (deficit) divided by the number of shares of our common stock outstanding as of .

Our pro forma net tangible book value as of was $ million, or $ per share. Pro forma net tangible book value per share represents the amount of our total tangible assets (net of deferred offering costs) less our total liabilities, divided by the number of shares of our common stock outstanding as of , after giving effect to the automatic conversion of all outstanding shares of preferred stock into shares of common stock immediately prior to the completion of this offering.

After giving further effect to the sale of shares of common stock that we are offering at the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us our pro forma as adjusted net tangible book value as of would have been $ million, or $ per share. This amount represents an immediate increase in pro forma net tangible book value of $ per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of $ per share to new investors purchasing shares of common stock in this offering.

Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the initial public offering price per share paid by new investors. The following table illustrates this dilution (without giving effect to any exercise by the underwriters of their option to purchase additional shares):

Assumed initial public offering price per share		$
Historical net tangible book deficit per share as of	$	
Pro forma increase in net tangible book value per share as of attributable to the pro forma adjustment described above		
Pro forma net tangible book value per share as of		
Increase in pro forma net tangible book value per share attributable to new investors participating in this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to new investors in this offering		$

The dilution information discussed above is illustrative only and may change based on the actual initial public offering price and other terms of this offering. Each $1.00 increase or decrease, as applicable, in the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the pro forma as adjusted net tangible book value per share after this offering by $, and dilution in pro forma net tangible book value per share to new investors by $, assuming that the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease, as applicable, of 1.0 million shares in the number of shares of common stock offered by us would increase or decrease, as applicable, our pro forma as adjusted net tangible book value per share after this offering by $ per share, in each case, and decrease or increase, as applicable, the dilution to investors participating in this offering by $ per share, assuming that the assumed initial public offering price remains the same, and after deducting estimated underwriting discounts, placement agent fee and commissions and estimated offering expenses payable by us.

If the underwriters exercise their option to purchase up to additional shares of our common stock in full, the pro forma as adjusted net tangible book value after the offering would be $ per share, the increase in pro forma net tangible book value per share to existing stockholders would be $ per share and the dilution per share to new investors would be $ per share, in each case assuming an initial public offering price of $ per share, which is the midpoint of the estimated offering range set forth on the cover page of this prospectus.

The following table summarizes on the pro forma as adjusted basis described above, as of , the differences between the number of shares of common stock purchased from us by our existing stockholders and common stock by new investors purchasing shares in this offering, the total consideration paid to us in cash and the average price per share paid by existing stockholders for shares of common stock issued prior to this offering and the price to be paid by new investors for shares of common stock in this offering. The calculation below is based on the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, before deducting underwriting discounts, placement agent fees and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Weighted-Average Price Per Share
	Number	Percentage	Amount	Percentage	
	(in thousands, except share, per share and percent data)				
Existing stockholders before this offering		%	$	%	$
New investors purchasing shares in this offering		%		%	$
Total		100.0	$	%	100.0

Each $1.00 increase or decrease, as applicable, in the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the total consideration paid by new investors by $ million and, in the case of an increase, would increase the percentage of total consideration paid by new investors to % and, in the case of a decrease, would decrease the percentage of total consideration paid by new investors to %, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. Similarly, each increase or decrease, as applicable, of 1.0 million shares in the number of shares offered by us, would increase or decrease, as applicable, the total consideration paid by new investors by $ million and, in the case of an increase, would increase the percentage of total consideration paid by new investors to % and, in the case of a decrease, would decrease the percentage of total consideration paid by new investors to %, assuming that the assumed initial public offering price of $ per share remains the same.

The foregoing tables and calculations (other than the historical net tangible book value calculation) are based on shares of common stock (which includes shares of restricted common stock) outstanding as of December 31, 2025 after giving effect to the automatic conversion of outstanding shares of our preferred stock into shares of common stock immediately prior to the completion of this offering, and excludes:

- shares of common stock issuable upon exercise of outstanding stock options as of December 31, 2025 under our 2019 Plan, with a weighted average exercise price of $ per share;
- shares of common stock issuable upon exercise of outstanding stock options granted after December 31, 2025 pursuant to our 2019 Plan, with a weighted average exercise price of $ per share;
- shares of common stock reserved for future issuance as of December 31, 2025 under the 2019 Plan, which will cease to be available for issuance at the time that our 2026 Plan becomes effective;
- shares of our common stock issuable upon exercise an outstanding warrant to purchase Series A preferred stock that will become a warrant to purchase common stock immediately prior to the completion of this offering, with an exercise price of $ per share;
- shares of our common stock reserved for future issuance under our 2026 Plan, which will become effective on the date immediately prior to the effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2026 Plan and any shares underlying outstanding stock awards granted under the 2019 Plan that expire or are repurchased, forfeited, cancelled or withheld; and
- shares of common stock reserved for future issuance under our ESPP, which will become effective on the date immediately prior to the effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the ESPP.

To the extent any outstanding options or warrants are exercised, new options or other equity awards are issued under our equity incentive plans, or we issue additional equity or convertible debt securities in the future, there will be further dilution to new investors.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our audited consolidated financial statements and related notes and other financial information included elsewhere in this prospectus. This discussion and analysis and other parts of this prospectus contain forward-looking statements based upon our current plans and expectations that involve risks, uncertainties and assumptions, such as statements regarding our plans, strategies, objectives, expectations, intentions and beliefs. Our actual results and the timing of events could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Risk Factors" and elsewhere in this prospectus. You should carefully read the "Risk Factors" section of this prospectus to gain an understanding of the important factors that could cause actual results to differ materially from our forward-looking statements. Please also see "Special Note Regarding Forward-Looking Statements."

Overview

We are a clinical-stage generative biology company pioneering the AI revolution in biotechnology and drug design and development. Our vision is to program biology to generate optimal therapeutics for the greatest impact on human health. Central to our vision is the Generate Platform, designed to be a therapeutic area and protein modality agnostic system integrating computational innovation with scalable biohardware to address therapeutic challenges beyond the reach of traditional technologies. We have built our Generate Platform to be a tight and fully-integrated loop (design–build–test–learn) to create proprietary, therapeutically relevant data and differentiated molecular solutions for the biological challenges we aim to address. In addressing these challenges, the Generate Platform can engineer solutions against therapeutic targets starting from either existing reference proteins or by suggesting completely novel ones without a reference starting point, also known as *de novo* design. The Generate Platform's therapeutic potential has been demonstrated by successfully progressing three computationally engineered proteins into human clinical testing, the most advanced of which is GB-0895, an investigational long-acting anti-thymic stromal lymphopoietin ("TSLP") monoclonal antibody, which is enrolling patients in pivotal Phase 3 clinical trials for severe asthma. Also, we expect to advance two additional computationally generated oncology product candidates into Phase 1 clinical trials in .

Since our inception, we have devoted substantially all of our resources to drug discovery, the development of our Generate Platform and the advancement of GB-0895 and our other product candidates, along with multiple preclinical programs in immunology and oncology. In addition to our research and development efforts, we have invested in establishing and protecting our intellectual property portfolio, raising capital and obtaining financing, organizing and staffing our company, and providing general and administrative support for these operations. We do not have any products approved for sale.

To date, we have not generated any revenue from product sales, and we have principally raised capital through the private placement of our Series A, Series B and Series C convertible preferred stock, par value $0.001 per share (collectively, the "preferred stock"), the issuance of convertible notes, payments from Amgen Inc. ("Amgen") and Novartis Pharma AG ("Novartis"), and cost-sharing payments from our other partnership, collaboration or licensing arrangements. Through December 31, 2024, we had received aggregate gross cash proceeds in excess of $910 million from such transactions, including $783.3 million from sales of our preferred stock, $12.0 million from our repaid term loan, $7.5 million from our now fully-converted convertible notes, and $110.0 million of payments under our collaboration agreements with Novartis and Amgen. We also have benefited from cost-sharing arrangements in our collaboration arrangements with The University of Texas M.D. Anderson Cancer Center ("MD Anderson"), Roswell Park Comprehensive Cancer Center ("Roswell Park") and Pioneering Medicines 02, Inc. ("PMCo"). Additionally, in January 2025, we received aggregate gross proceeds of $22.0 million from the sale and issuance of shares of our Series C preferred stock. As needed, we will seek additional funding through public or private equity or debt financings, government or other third-party grants, asset sales, royalty financings, partnership, collaboration and licensing arrangements, or a combination of these approaches. We may not be able to obtain funding on acceptable terms, or at all. The terms of any future financing may adversely affect the holdings or the rights of our current stockholders.

If we are unable to obtain funding, we could be forced to delay, limit, reduce or eliminate some or all of our research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect our business prospects, or we may be unable to continue

operations. Although management continues to pursue these plans, there is no assurance that we will be successful in obtaining sufficient funding on terms acceptable to us to fund continuing operations, if at all.

We have incurred significant operating losses since inception, and we expect to continue to incur substantial losses for the foreseeable future. Our ability to generate product revenue sufficient to achieve profitability will depend heavily on the successful development and eventual commercialization of one or more of our product candidates and any additional product candidates we may develop. Our net losses were $181.4 million and $ million, of which $7.6 million and $ million was attributable to a non-controlling interest for the years ended December 31, 2024 and 2025, respectively. As of December 31, 2025, we had an accumulated deficit of $ million.

We anticipate that our expenses and operating losses will increase substantially for the foreseeable future if and as we:

- expand the number of our research and development programs;
- continue or expand our scope of research or development of our current programs and product candidates in preclinical development;
- continue or expand the scope of our clinical trials for our product candidates;
- initiate additional preclinical, clinical or other studies for our programs and product candidates, including pursuant to some of our partnership, collaboration and licensing arrangements;
- change or add additional manufacturers or suppliers;
- add additional infrastructure to our quality control and quality assurance groups to support our operations as we progress our product candidates toward commercialization;
- attract and retain skilled personnel;
- create additional infrastructure to support our operations as a public company and our product development and planned future commercialization efforts;
- seek marketing approvals and reimbursement for our product candidates and products;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- acquire or in-license technologies;
- make payments under any in-license agreements;
- maintain, protect and expand our intellectual property portfolio; and
- experience any delays or encounter issues with any of the above.

We do not expect to generate revenue from product sales unless and until we or our collaboration partners successfully complete the clinical development or future clinical development of, and obtain regulatory approval for, one or more of our current or future product candidates, including any jointly-developed product candidates, which will not be for several years, if ever. If we obtain regulatory approval for any of our product candidates and do not enter into a commercialization partnership, we expect to incur significant expenses related to developing our commercialization capability to support product sales, manufacturing, marketing, market access and distribution.

Our net losses may fluctuate significantly from period to period, depending on the timing of our current and potential future clinical trials and expenditures related to our research and developmental activities. Furthermore, following the closing of this offering, we expect to incur additional costs associated with operating as a public company, including significant audit, legal and regulatory expenses, as well as director and officer insurance premiums and investor relations costs that we did not incur as a private company. As a result, we will need substantial additional funding to support our continuing operations and pursue our growth strategy. Until such a time when we can generate significant revenue from product sales, if ever, we expect to finance our operations through public or private equity or debt financings, government or other third-party grants, asset sales, royalty financings, partnership, collaboration and licensing arrangements, or a combination of these approaches. We may

be unable to raise additional funds or enter into such other agreements or arrangements when needed on favorable terms, or at all. Our failure to raise capital or enter into such agreements or arrangements as, and when needed, could have a material adverse effect on our business, results of operations and financial condition, including potentially requiring us to delay, limit, reduce or eliminate product development or future commercialization efforts, or grant rights to develop and market current or future development product candidates that we would otherwise prefer to develop and market ourselves.

As there are numerous risks and uncertainties associated with product development, we are unable to accurately predict the timing or amount of increased expenses or when or if we will be able to achieve or maintain profitability. Even if we are able to generate product sales, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce or terminate our operations.

As a result, we will need substantial additional capital to support our continuing operations and pursue our strategy. As of December 31, 2025, we had cash, cash equivalents and marketable securities of $ million. These amounts are not expected to be sufficient to fund our operations for at least twelve months from the date of issuance of the consolidated financial statements included elsewhere in this prospectus. Therefore, there is substantial doubt about our ability to continue as a going concern. Our management has developed plans to fund our operations, which primarily consist of raising additional capital through one or more of the following: public or private equity or debt financings, government or other third-party grants, asset sales, royalty financings, partnership, collaboration and licensing arrangements, or a combination of these approaches. However, there can be no assurance that we will be able to complete any such transaction on acceptable terms or otherwise, and we may be unable to obtain sufficient additional capital. If we are not able to secure sufficient additional capital in the near term, we will need to implement additional cost reduction strategies, which could include delaying, limiting, further reducing or eliminating both internal and external costs related to our operations and research and development programs. For more information, refer to "*—Liquidity and Capital Resources*" below and Note 1 to our consolidated financial statements included elsewhere in this prospectus.

Components of Results of Operations

Revenues

We have not generated any revenues from the sale of products to date and do not expect to generate any revenues from the sale of products for the next several years, if at all. If our development efforts for our current or future product candidates are successful and result in regulatory approval, we may generate revenues in the future from product sales. For the foreseeable future, we expect substantially all of our revenues to be generated from our current collaboration arrangements with Novartis and Amgen. For more information on our collaboration agreements with Novartis and Amgen, please see "*Collaboration Agreements"* below and Note 5 to our consolidated financial statements included elsewhere in this prospectus.

Operating Expenses

Our operating expenses consist of (i) research and development expenses and (ii) general and administrative expenses.

Research and Development Expenses

Research and development expenses consist primarily of external and internal costs incurred for our research and development activities, including development of our platform, our product discovery efforts and the development of our future product candidates. These expenses include:

- external expenses, including expenses incurred under arrangements with third-parties, such as contract development and manufacturing organizations ("CDMOs"), contract research organizations ("CROs"), providers of sponsored research, consultants and our scientific advisors;
- costs related to compliance with regulatory authorities;
- direct costs of conducting internal research and development for our internal preclinical programs;

- intellectual property and related future payments should certain development and regulatory milestones be achieved;
- personnel-related costs, including salaries, bonuses, benefits and stock-based compensation for employees engaged in research and development functions;
- expenses incurred for the procurement of materials, third-party license fees, laboratory supplies and non-capital equipment used in the research and development process; and
- depreciation, amortization and other direct and allocated expenses, including rent, insurance, maintenance of facilities and other operating costs, incurred as a result of our research and development activities.

We expense research and development costs as incurred. Non-refundable advance payments that we make for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses. The prepaid amounts are expensed as the related goods are delivered or the services are performed, or when it is no longer expected that the goods will be delivered or the services rendered.

We record accruals for estimated ongoing research costs and receive updated estimates of costs and amounts owed on a monthly basis from our third-party service providers. When evaluating the adequacy of the prepaid expenses and accrued liabilities, we analyze progress of the studies, including the phase or completion of events, invoices received and contracted cost estimates from its third-party service providers. Estimates are made in determining the balances at the end of any reporting period.

We use our personnel and infrastructure resources for our research and development efforts, including the advancement and development of our platform, product candidates and managing external research and development efforts. A significant portion of our research and development costs have been, and will continue to be, external costs. We track our external expenses on a program-by-program basis. Due to our ability to use certain resources across several programs, personnel-related expenses and indirect or shared operating costs incurred for our research and development programs are not recorded or maintained on a program-by-program basis.

We anticipate that our research and development expenses will increase substantially for the foreseeable future in connection with our ongoing clinical trials and our planned clinical development activities in the near term and in the future. However, we cannot reasonably estimate the costs or timing of the efforts that will be necessary to complete the development of any of our product candidates due to the numerous risks and uncertainties associated with their development, including the uncertainty of:

- the scope, timing, costs and progress of clinical development activities related to GB-0895, including expansion into other indications, and our other product candidates;
- the number and scope of additional preclinical and clinical programs we decide to pursue, and the number of product candidates we decide to develop further;
- our successful enrollment in and completion of clinical trials;
- our ability to commercialize products, if and when approved, whether alone or in collaboration with others;
- third-party maintaining existing, or arranging for new CDMOs, to support clinical trials of our product candidates;
- seeking regulatory approvals for any of our product candidates that successfully complete clinical trials;
- securing access rights to external products, technologies or intellectual property;
- hiring additional clinical, quality control, manufacturing and other scientific personnel;
- the terms and timing of any partnership, collaboration, or license arrangement, including the terms and timing of any milestone or royalty payments thereunder, if any; and
- general economic conditions, including inflation.

Any changes in the outcome of any of these variables with respect to the development of our programs and product candidates or any future programs and product candidates that we may identify could result in a significant change in the costs and timing associated with the development of that program or product candidate. For example, if the U.S. Food and Drug Administration, the European Medicines Agency or another regulatory authority were to require us to conduct clinical trials beyond those that we anticipate would be required for the completion of clinical development of a product candidate, or if we experience significant delays in our clinical trials due to slower than expected patient enrollment or other reasons, we would be required to expend significant additional financial resources and time on the completion of clinical development. We may never succeed in achieving regulatory approval for any of our product candidates or any future product candidates that we may identify.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel-related costs, including salaries, bonuses, benefits and stock-based compensation expenses for employees in executive, accounting and finance, business development, human resources, legal and other administrative functions. Other significant general and administrative expenses include allocated facility related costs including depreciation, legal fees relating to corporate and intellectual property matters and other corporate matters, professional fees for accounting, auditing and tax services, consulting fees and insurance costs.

We anticipate that our general and administrative expenses will increase as we increase our headcount to support our research and development activities and the potential commercialization of our product candidates, if approved. Additionally, these increases will likely include increased costs related to the hiring of additional personnel, among other expenses. We also expect to incur increased expenses associated with being a public company, including increased costs of accounting, audit, legal, regulatory and tax-related services associated with maintaining compliance with exchange listing and the Securities and Exchange Commission's (the “SEC”) requirements, director and officer insurance costs, and investor and public relations costs. We also expect to incur additional intellectual property-related expenses as we file patent applications to protect innovations arising from our research and development activities.

Other Income (Expense), Net

Other income (expense), net primarily consists of interest income generated from interest bearing cash, cash equivalents and marketable securities, change in fair value associated with the preferred stock warrant liability, realized and unrealized gains and losses on foreign currency transactions and interest expense associated with our finance lease of lab equipment. We classified the preferred stock warrants as a liability on our consolidated balance sheets. The preferred stock warrant liability was initially recorded at fair value upon the issuance date of the warrant and is subsequently remeasured to fair value at each reporting date. The resulting change in the fair value of the preferred stock warrant liability is recorded as a component of other income (expense) in our consolidated statements of operations. We will continue to recognize changes in the fair value of this preferred stock warrant liability at each reporting period until each respective warrant is exercised, expires or qualifies for equity classification.

Income Taxes

Income tax expenses (benefit) consists of U.S. federal and state income taxes. As of December 31, 2025, we had $ million and $ million of U.S. federal and state net operating loss ("NOL") carryforwards, respectively. The federal NOL carryforwards are not subject to expiration and the state NOL carryforwards begin to expire in 2042. These loss carryforwards are available to reduce future federal and state taxable income, if any.

Utilization of our NOL carryforwards may be subject to a substantial annual limitation due to ownership change limitations that have occurred previously or that could occur in the future in accordance with Section 382 of the Internal Revenue Code of 1986, as amended (the “Code”), as well as similar state provisions. These “ownership changes,” as defined by Section 382 of the Code, may limit the amount of NOL and research and development credit carryforwards that can be utilized annually to offset future taxable income and taxes, respectively. In general, an ownership change as defined by Section 382 of the Code results from transactions increasing the ownership of certain stockholders or public groups in the stock of a corporation by more than 50% over a three-year period. In the third quarter of 2021, we had an ownership change as defined by Sections 382 and 383 of the

Code. As a result, if we earn net taxable income, our ability to use our pre-ownership change NOL carryforwards and other pre-change tax attributes to offset such taxable income may be subject to limitations, which could result in increased future tax liability to us and could have an adverse effect on our future results of operations.

Income taxes are determined at the applicable tax rates adjusted for non-deductible expenses and other permanent differences. Our income tax provision may be significantly affected by changes to our estimates.

Loss attributable to non-controlling interest

In connection with our agreement with Pioneering Medicines 02, Inc. ("PMCo"), we determined that we are the primary beneficiary of PMCo, and therefore we consolidated PMCo. However, we do not have any equity interest in PMCo, therefore all net losses associated with PMCo are attributable to the non-controlling interest holders. The net losses attributable to non-controlling interest holders is the loss absorbed by the holders of the ownership interest of PMCo, which consist primarily of research and development costs that were reimbursed by PMCo under our collaboration agreement with PMCo.

Results of Operations

Comparison of the Years Ended December 31, 2024 and 2025

The following table summarizes our results of operations for the years presented (in thousands):

	YEAR ENDED DECEMBER 31,		
	2024	2025	Change
Revenue:			
Collaboration revenue	$ 20,459		
Operating expenses:			
Research and development	175,311		
General and administrative	42,087		
Total operating expenses	217,398		
Loss from operations	(196,939)		
Other income (expense), net			
Change in fair value of preferred stock warrant liability	(154)		
Interest expense	(2,118)		
Interest income	18,118		
Foreign currency exchange loss	(79)		
Total other income (expense), net	15,767		
Loss before provision for income taxes	(181,172)		
Provision for income taxes	(212)		
Net loss	$ (181,384)		
Net loss attributable to non-controlling interests	(7,613)		
Net loss attributable to Generate Biomedicines, Inc. stockholders	$ (173,771)		

Collaboration Revenue

Collaboration revenue increased from $20.5 million for the year ended December 31, 2024 compared to $ million for the year ended December 31, 2025. The $ million increase in collaboration revenue for the year ended December 31, 2025 compared to the year ended December 31, 2024 was primarily due to .

Research and Development Expense

The following table summarizes our research and development expenses for the years presented (in thousands):

	YEAR ENDED DECEMBER 31,		
	2024	2025	Change
External research and development costs by program:			
GB-0895	$ 17,443		
Other research and development costs:			
External - discovery related costs and other	68,459		
Personnel-related (excluding stock-based compensation)	65,292		
Equity-based compensation	9,114		
Depreciation expense	15,003		
Total research and development expense	$ 175,311		

Research and development expenses increased from $175.3 million for the year ended December 31, 2024 compared to $ million for the year ended December 31, 2025. The $ million increase in research and development expenses for the year ended December 31, 2025 compared to the year ended December 31, 2024 was primarily due to .

Research and development expenses related to the GB-0895 program for the years ended December 31, 2024 and 2025 were $17.4 million and $ million, respectively. The of $ million for the year ended December 31, 2025 compared to the year ended December 31, 2024 was primarily driven by . The of $ million for the year ended December 31, 2025 compared to the year ended December 31, 2024 was primarily driven by .

Personnel-related expenses and equity based compensation increased by $ million and $ million in the year ended December 31, 2025, respectively, compared to the year ended December 31, 2024, primarily driven by . External-discovery related costs and other expenses by $ million for the year ended December 31, 2025 compared to the year ended December 31, 2024, primarily driven by . Depreciation expense by $ million for the year ended December 31, 2025 compared to the year ended December 31, 2024 primarily due to .

General and Administrative Expenses

The following table summarizes our general and administrative expenses for the years presented (in thousands):

	YEAR ENDED DECEMBER 31,		
	2024	2025	Change
Personnel-related (excluding stock-based compensation)	$ 17,515		
Equity-based compensation	10,350		
Professional fees	9,399		
Other costs	4,823		
Total general and administrative expense	$ 42,087		

General and administrative expenses increased from $42.1 million for the year ended December 31, 2024 to $ million for the year ended December 31, 2025. The $ million increase in general and administrative expenses for the year ended December 31, 2025 compared to the year ended December 31, 2024 was primarily due to an increase of .

Other Income (Expense), Net

Other income (expense), net increased from $15.8 million for the year ended December 31, 2024 to $ million for the year ended December 31, 2025. The $ million increase for the year ended December 31, 2025 compared to the year ended December 31, 2024 in other income (expense), net for the year ended December 31, 2025 was primarily related to .

Loss Attributable to Non-Controlling Interest

Loss attributable to non-controlling interest increased from $7.6 million for the year ended December 31, 2024 to $ million for the year ended December 31, 2025. The $ million increase for the year ended December 31, 2025 compared to the year ended December 31, 2024 was primarily related to .

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have incurred significant operating losses and negative cash flows from operations. We have not yet commercialized any of our product candidates, which are in clinical or preclinical development, and we do not expect to generate revenue from sales of any products for several years, if at all. To date, we have financed our operations primarily through private placements of our convertible preferred stock, the issuance of convertible notes, payments from Amgen and Novartis, and cost-sharing payments from our other partnership, collaboration or licensing arrangements. Through December 31, 2024, we had received aggregate gross cash proceeds in excess of $910.0 million from such transactions, including $783.3 million from sales of our preferred stock, $12.0 million from our repaid term loan, $7.5 million from our now fully-converted convertible notes, and $110.0 million of payments under our collaboration agreements with Novartis and Amgen. In addition, we have benefited from cost-sharing arrangements in our collaboration arrangements with MD Anderson, Roswell Park and PMCo.

Cash Flows

The following table provides information regarding our cash flows for the years presented (in thousands):

	YEAR ENDED DECEMBER 31,		
	2024	2025	Change
Net cash provided by (used in):			
Operating activities	$ (117,750)		
Investing activities	(57,725)		
Financing activities	91,327		
Net increase (decrease) in cash and cash equivalents	$ (84,148)		

Operating Activities

Our cash flows from operating activities are greatly influenced by our use of cash for operating expenses and working capital requirements to support our business. We have historically experienced negative cash flows from operating activities as we invested in research and development of our platform, product candidates, including preclinical studies, clinical trials, manufacturing and manufacturing process development. The cash used in operating activities resulted primarily from our net losses adjusted for non-cash charges, which are generally due to stock-based compensation, depreciation and amortization and non-cash lease expense, as well as changes in components of operating assets and liabilities, which are generally due to deferred revenue, increased expenses and timing of vendor payments.

For the year ended December 31, 2024, operating activities used $117.8 million of cash, primarily resulting in a net loss of $181.4 million, which was partially offset by changes in operating assets and liabilities that provided $28.1 million in cash and net non-cash expenses of $35.5 million.

For the year ended December 31, 2025, operating activities used $ million of cash, primarily resulting in a net loss of $ million, which was partially offset by changes in operating assets and liabilities that provided $ million in cash and net non-cash expenses of $ million.

Investing Activities

During the year ended December 31, 2024, net cash used in investing activities was $57.7 million, which primarily consisted of purchases of marketable securities and equipment, offset by sales of marketable securities.

During the year ended December 31, 2025, net cash used in investing activities was $ million, which primarily consisted of purchases of marketable securities and equipment, offset by sales of marketable securities.

Financing Activities

During the year ended December 31, 2024, net cash provided by financing activities of $91.3 million primarily related to proceeds received from issuance of our Series C preferred stock, net of issuance costs, offset by payments on finance lease obligations.

During the year ended December 31, 2025, net cash provided by financing activities of $ million primarily to proceeds received from issuance of our Series C preferred stock, net of issuance costs, offset by payments on finance lease obligations.

Future Funding Requirements

We expect our future capital requirements to increase substantially over time in connection with our ongoing research and development activities, particularly as we advance our current and planned clinical development of our product candidates and maintain the research efforts and preclinical activities associated with our other existing programs and discovery platform. In addition, if we obtain regulatory approval for any of our product candidates, we expect to incur significant expenses related to product sales, marketing and distribution to the extent that such sales, marketing and distribution are not the responsibility of potential collaborators. Further, upon the completion of this offering, we expect to incur additional costs associated with operating as a public company. As a result, we expect to incur substantial operating losses and negative operating cash flows for the foreseeable future.

Inflation generally affects us by increasing our cost of labor and certain services. We do not believe that inflation had a material effect on our consolidated financial statements included elsewhere in this prospectus. However, the United States has recently experienced historically high levels of inflation. If the inflation rate continues to increase, it may affect our expenses, such as employee compensation and research and development charges due to, for example, increases in the costs of labor and supplies.

As of December 31, 2025, we had total cash, cash equivalents and marketable securities of $ million. We believe that our existing cash and cash equivalents, together with the anticipated net proceeds from this offering, will enable us to fund our operating expenses and capital expenditure requirements through . We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. However, our forecast for the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement that involves risks and uncertainties and actual results could vary materially. Additionally, the process of conducting preclinical studies and testing product candidates in clinical trials is costly, and the timing of progress and expenses in these studies and trials is uncertain. We will need to raise substantial additional capital in the future.

Because of the numerous risks and uncertainties associated with product development, and because the extent to which we may enter into collaborations with third-parties for the development of our product candidates is unknown, we may incorrectly estimate the timing and amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates. Our funding requirements and timing and amount of our operating expenditures will depend on many factors, including, but not limited to:

- the progress, results and costs of, discovery and preclinical studies for our programs and development candidates;
- our ability to advance our clinical-stage product candidates into later-stage trials, which we expect will be required in order to seek marketing approval of our product candidates;
- the costs associated with maintaining and improving our Generate Platform;

- our ability to scale up our manufacturing processes and capabilities, or arrange for a third-party to do so on our behalf, to support our clinical trials of our product candidates and commercialization of any of our product candidates for which we obtain marketing approval;
- our ability to seek regulatory and marketing approvals for any of our product candidates that successfully complete clinical trials;
- the costs associated with acquiring or in-licensing products, product candidates or technologies or intellectual property;
- the costs associated with maintaining, expanding, enforcing, defending and protecting our intellectual property;
- the costs associated with hiring additional clinical, quality control, manufacturing and other scientific personnel;
- the costs and timing of establishing or securing sales and marketing capabilities if any current or future product candidate is approved; and
- the costs associated with making any milestone, royalty or other payments under any collaboration or license agreements that we enter into.

Identifying potential product candidates and conducting preclinical studies and clinical trials is a time consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products that we do not expect to be commercially available for many years, if ever. Accordingly, we will need to obtain substantial additional funds to achieve our business objectives.

Our expectation with respect to our ability to fund current planned operations is based on estimates that are subject to risks and uncertainties. Our operating plan may change as a result of many factors currently unknown to management and there can be no assurance that the current operating plan will be achieved in the time frame anticipated by us, and we may need to seek additional funds sooner than planned. If we are unable to raise this capital when needed, we may be forced to delay, limit, reduce or eliminate one or more of our research and development programs or other operations.

Adequate additional funds may not be available to us on acceptable terms, or at all. To the extent that we raise additional capital through the sale of equity or issuance of convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Additional debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring debt, making capital expenditures or declaring dividends and may require the issuance of warrants, which could potentially dilute your ownership interest. If we raise additional funds through partnership, collaboration or licensing arrangements with third-parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or development product candidates or grant licenses on terms that may not be favorable to us. Our failure to raise capital or enter into such other arrangements when needed could have a negative impact on our financial condition and on our ability to pursue our business plans and strategies. For instance, if we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development programs or any future commercialization efforts or grant rights to develop and market development product candidates to third-parties that we would otherwise prefer to develop and market ourselves.

Contractual Obligations and Other Commitments

Leases

We lease office space in Somerville, Massachusetts under a non-cancelable operating lease that expires in June 2032 and lease office and laboratory space in Andover, Massachusetts under a non-cancelable operating lease, as amended, that expires in December 2034. Our operating lease in Andover, Massachusetts includes an option of early termination allowing us to terminate the lease on or after December 31, 2031. We also entered into a finance lease agreement for the purchase of lab

equipment. Future minimum commitments under these leases are $ million as of December 31, 2025. These commitments are also recognized as operating lease liabilities and finance lease liabilities on our balance sheet as of December 31, 2025. See Note in our audited consolidated financial statements appearing elsewhere in this prospectus for more information on our lease obligations.

Purchase and Other Obligations

We enter into contracts in the normal course of business with third-party CROs, CDMOs and other third-party vendors for preclinical, clinical trials and testing and manufacturing services. These contracts do not contain minimum purchase commitments and are cancellable by us upon written notice. Payments due upon cancellation generally consist of payments for services provided or expenses incurred up to the date of cancellation, including non-cancelable obligations of our service providers and, in some cases, wind-down costs. For further information regarding certain of our license agreements and amounts that could become payable in the future under those agreements, please see Note in our audited consolidated financial statements appearing elsewhere in this prospectus.

License and Collaboration Agreements

Below is a summary of the key terms for certain of our license and collaboration agreements. For a more detailed description of these agreements, see the section titled "*Business—License and Collaboration Agreements.*"

Agreement with Novartis

On September 19, 2024, we entered into a Collaboration and License Agreement with Novartis (the "Novartis Collaboration Agreement") to discover, develop, manufacture and commercialize protein therapeutics using our Generate Platform. The collaboration covers multiple collaboration targets, conducted under applicable research plans during defined research terms. As consideration for the collaboration, we received a $50.0 million upfront payment. Novartis also purchased 1,265,822 shares of our Series C preferred stock for $15.0 million. We are eligible to receive up to $1.0 billion across all programs upon the achievement of certain performance-based milestones, including $130.0 million in development and regulatory milestones and $210.0 million in commercial milestones per research program. None of such milestones have been achieved to date. Novartis is also obligated to pay, on a licensed product-by-licensed product and on a country-by-country basis, tiered royalties ranging from a mid-single digit to a low double-digit percentage on worldwide net sales of any licensed product, subject to specified reductions and offsets.

Agreement with Amgen

On December 24, 2021, we entered into a Collaboration and License Agreement, as amended by the First Amendment dated October 5, 2022 and the Second Amendment dated December 12, 2023 (as amended from time to time, the "Amgen Collaboration Agreement"), with Amgen to identify biologic proteins and antibodies directed against specified targets. The Amgen Collaboration Agreement covers six collaboration targets, conducted under applicable research plans during defined research terms. In addition, Amgen has the option to nominate up to five additional collaboration targets, at additional cost, the first of which was exercised in December 2023 related to the sixth target. As consideration for the collaboration, we received a $50.0 million upfront payment. Additionally, the Amgen Collaboration Agreement included an investment commitment by Amgen of $25.0 million in equity, at the offering price, if we consummated certain future equity offerings. Amgen purchased 2,109,704 shares of our Series C preferred stock for approximately $25.0 million in May 2023. In connection with the Second Amendment, which added an additional target, we received an additional payment of $5.0 million in December 2023. We received a development milestone payment of $5.0 million in August 2024. We are eligible to receive up to $370.0 million for each program upon the achievement of certain milestones, including $160.0 million in development and regulatory milestones and $210.0 million in commercial milestones per program. Amgen is also obligated to pay, on a licensed product-by-licensed product and on a country-by-country basis, tiered royalties ranging from a mid-single digit up to a low double-digit percentage on worldwide net sales of any licensed product, subject to customary reductions and offsets.

Agreement with Pioneering Medicines 02, Inc.

On June 22, 2023, we entered into a collaboration agreement (the "PMCo Agreement"), with PMCo, an affiliate of Flagship Pioneering, pursuant to which the parties agreed to collaborate on

research and development activities with respect to the licensed products containing certain antibodies against TSLP and/or IL-4Rα and share research and development costs, with us bearing 65% and PMCo bearing 35% of all fully-burdened research costs and development expenses, which percentage commitments are subject to adjustment. On January , 2026, we entered into an amended and restated collaboration agreement with PMCo, pursuant to which .

Critical Accounting Policies, Estimates and Significant Judgments

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States ("GAAP"). The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, costs and expenses and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, as well as the reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in Note 2 to our consolidated financial statements included elsewhere in this prospectus, we believe the following accounting policies used in the preparation of our consolidated financial statements are the most critical for fully understanding and evaluating our financial condition and results of operations.

Collaboration Revenue

Our collaboration revenue to date is comprised of amounts recognized from our collaboration agreements with Amgen and Novartis. We recognize revenue in accordance with ASC 606, *Revenue from Contracts with Customers* ("ASC 606").

Under ASC 606, revenue is recognized when a customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. In order to achieve this core principle, we apply the following five steps when recording revenue: (i) identify the contract, or contracts, with the customer, (ii) identify the performance obligations in the contract, (iii) determine the transaction price, (iv) allocate the transaction price to the performance obligations in the contract and (v) recognize revenue when, or as, performance obligations are satisfied.

The promised goods or services in our arrangements typically consist of license rights and research and development services. Performance obligations are promised goods or services in a contract to transfer a distinct good or service to the customer. In assessing whether promised goods or services are distinct, we consider factors such as the stage of development of the underlying intellectual property, the capabilities of the customer to develop the intellectual property on their own and whether the required expertise is readily available. In addition, we consider whether the customer can benefit from a promise for its intended purpose without the receipt of the remaining promises, whether the value of the promise is dependent on the unsatisfied promises, whether there are other vendors that could provide the remaining promises and whether it is separately identifiable from the remaining promises. We allocate the transaction price to the identified performance obligations based on the estimated standalone selling price. We must develop assumptions that require judgment to determine the standalone selling price for each performance obligation identified in the contract. We utilize key assumptions to determine the standalone selling price, which may include other comparable transactions, pricing considered in negotiating the transaction and the estimated cost. We then recognize as revenue the amount of the transaction price that is allocated to the respective performance obligation when or as the performance obligation is satisfied.

We use judgment to determine whether milestones or other variable consideration, except for royalties and sales-based milestones where such payments principally relate to a license of intellectual property, should be included in the transaction price. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within our control or the licensee, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. We evaluate factors such as the scientific, clinical, regulatory, commercial, and other risks that must be overcome to achieve the particular milestone in making this assessment. There is considerable judgment involved in

determining whether it is probable that a significant revenue reversal would not occur. At the end of each subsequent reporting period, we reevaluate the probability of achievement of all milestones subject to constraint and, if necessary, adjusts its estimate of the overall transaction price. The transaction price is allocated to each performance obligation based on the relative standalone selling price of each performance obligation in the contract. Certain variable consideration is allocated specifically to one or more performance obligations in a contract when the terms of the variable consideration relate to the satisfaction of the performance obligation and the resulting amounts allocated to each performance obligation are consistent with the amounts we would expect to receive for each performance obligation.

For research and development services performed under a collaboration agreement in which the performance obligation is satisfied over time, we measure the progress of the activities using input methods. The input methods used are based on the effort expended or costs incurred toward the satisfaction of the related performance obligation. We estimate the amount of effort expended, including the time we estimate it will take to complete the activities, or costs incurred in a given period, relative to the estimated total effort or costs to satisfy the performance obligation. This approach requires estimates and the use of significant judgement. If the estimates or judgements change over the course of the collaboration, they may affect the timing and amount of revenue recognized in the current and future periods.

For arrangements that include sales-based royalties, including milestone payments based on a level of sales, and the license is deemed to be the predominant item to which the royalties relate, we recognize revenue at the later of (i) when the related sales occur or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). To date, we have not recognized any royalty revenue resulting from any of its licensing arrangements.

Research and Development Expenses and Related Accruals and Prepaid Expenses

Research and development expenses are comprised of costs incurred in performing research and development activities, including salaries, stock-based compensation and benefits, facilities costs and laboratory supplies, depreciation, manufacturing expenses and external costs of outside vendors engaged to conduct planned clinical development, preclinical development, manufacturing and manufacturing process development and other research support activities. All costs associated with research and development activities are expensed as incurred. Research and development costs that are paid in advance of performance (if any) are capitalized as a prepaid expense and amortized over the service period as the services are provided.

As part of the process of preparing our consolidated financial statements, we are required to estimate our accrued and prepaid expenses as of each balance sheet date. We make estimates of these based on facts and circumstances known to us at that time. This process involves recording accruals and prepaids for estimated ongoing research costs and receiving updated estimates of costs and amounts owed on a monthly basis from its third-party service providers. When evaluating the adequacy of the accrued liabilities and prepaid expenses, we analyze progress of the studies, including the phase or completion of events, invoices received and contracted cost estimates from its third-party service providers.

Although we do not expect our estimates to be materially different from amounts incurred, if our estimates of the status and timing of services performed differ from the actual status and timing of services performed, it could result in us reporting accrued amounts that are too high or too low in any particular period. To date, there have been no material differences between our estimates of such expenses and the amounts incurred.

Stock-Based Compensation

We have issued and continue to issue stock-based awards to our employees and non-employees in the form of incentive stock options. In addition, we historically issued a limited number of restricted stock awards. We account for stock-based compensation awards in accordance with the Financial Accounting Standards Board ("FASB") ASC Topic 718, *Compensation—Stock Compensation* (ASC 718).

We measure stock-based awards granted to employees and nonemployees based on their fair value on the date of the grant and recognize compensation expense for those awards over the requisite service period, which is generally the vesting period of the respective award. For stock-based

awards with service-based vesting conditions, we recognize compensation expense using the straight-line method. For stock-based awards with performance-based vesting conditions, we recognize compensation expense using the graded-vesting method over the requisite service period, commencing when achievement of the performance condition becomes probable. Forfeitures are recorded as they occur.

Determination of the Fair Value of Equity-Based Awards

The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model (the "Black-Scholes OPM"). The Black-Scholes OPM requires inputs based on certain subjective assumptions, including (i) the expected stock price volatility, (ii) the expected term of the award, (iii) the risk-free interest rate, (iv) expected dividends and v) the fair value of common stock. Due to the lack of a public market for our common stock and lack of company-specific historical and implied volatility data, we have based our computation of expected volatility on the historical volatility of a representative group of publicly traded peer companies. We estimate the expected term of our stock options granted to employees and directors using the simplified method for awards that qualify as “plain-vanilla” options, whereby the expected term equals the midpoint between the vesting date and the end of the contractual term of the option. We utilize this method as we do not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. The risk-free interest rate is based on U.S. Treasury securities with a maturity date commensurate with the expected term of the associated award. The expected dividend yield is assumed to be zero as we have never paid dividends and have no current plans to pay any dividends on our common stock.

As of December 31, 2025, there was approximately $ million of unrecognized compensation expense related to unvested stock options granted under the 2019 Equity Incentive Plan, as amended (the “2019 Plan”), which were subject to service-based vesting or performance awards for which the performance condition had been achieved and have a remaining service condition. That cost is expected to be recognized over a weighted-average period of years.

Determination of the Fair Value of Common Stock

As there has been no public market for our common stock to date, the historical estimated fair value of our common stock has been determined by our board of directors (the “Board”), with input from management, considering our most recently available third-party valuations of common stock, as well as additional factors which may have changed since the date of the most recent valuation through the date of grant.

The grant date fair value of restricted common stock is calculated based on the grant date fair value of the underlying common stock less any purchase price. The fair value of the common stock is also used as an input to the Black-Scholes OPM to value stock options. The Board determines the fair value of our common stock, with input from management, considering our most recently available third-party valuations of common stock, as well as additional factors which may have changed since the date of the most recent valuation through the date of grant. Significant changes to the key assumptions underlying the factors used could result in different fair values of common stock at each valuation date.

In accordance with the guidance outlined in the American Institute of Certified Public Accountants’ Accounting and Valuation Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation, a third-party valuation firm prepared valuations of our common stock using a market approach to estimate our enterprise value, using either the option-pricing method (“OPM”), or the hybrid method, both of which used a market approach to estimate our enterprise value. In accordance with the Practice Aid, we determined the hybrid method was the most appropriate method for determining the fair value of our common stock based on our stage of development and other relevant factors. The OPM treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company’s securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceed the value of the preferred stock liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. A discount for lack of marketability of the common stock is then applied to arrive at an indication of value for the common stock. The hybrid method is a weighted blend of an OPM and a probability-weighted expected return method (“PWERM”), where the equity value in one or more scenarios is calculated using an OPM. The PWERM is a scenario-based methodology that estimates the fair value of common stock based upon an analysis of our future values, assuming various outcomes. The common stock value is based on the probability-weighted present value of expected future investment returns considering each of the

possible outcomes available as well as the rights of each class of stock. The future value of the common stock under each outcome is discounted back to the valuation date at an appropriate risk-adjusted discount rate and probability-weighted to arrive at an indication of value for the common stock. These third-party valuations were performed at various dates, which resulted in valuation of our common stock of $4.93 per share as of May 16, 2024, $6.02 per share as of December 31, 2024 and $7.29 as of November 24, 2025. Additionally, we performed a retrospective valuation as of September 5, 2025 which resulted in a value of $6.43 per share of common stock.

Given the absence of a public market for our common stock to date, our Board, with input from management, considered various objective and subjective factors to determine the fair value of our common stock as of each grant date.

The factors included, but were not limited to:

- our operating results and financial performance;
- the progress of our research and development efforts, including the status of our programs, and the preclinical studies, clinical trials, and manufacturing process development for our product candidates;
- the lack of marketability of our equity as a private company;
- the prices of our preferred stock sold to or exchanged between new and existing investors, and the rights, preferences and privileges of our preferred stock as compared to those of our common stock;
- our stage of development and business strategy and the material risks related to our business and industry;
- the achievement of enterprise milestones, including entering into strategic alliance and license agreements;
- the valuation of publicly traded companies in the life sciences and biotechnology sectors, as well as recently completed mergers and acquisitions of peer companies;
- any external market conditions affecting the biotechnology industry, and trends within the biotechnology industry;
- the likelihood of achieving a liquidity event, such as an IPO, or a sale of our company, given prevailing market conditions;
- the analysis of IPOs and the market performance of similar companies in the biotechnology industry; and
- the third-party valuations described above.

There are significant judgments and estimates inherent in these valuations. These judgments and estimates include assumptions regarding our future operating performance, and the stage of development of our product candidates. If our Board had made different assumptions, our stock-based compensation expense, net loss attributable to common stockholders and net loss per stock attributable to common stockholders could have been significantly different.

Once a public trading market for our common stock has been established in connection with the consummation of this offering, it will no longer be necessary for our Board, or a committee thereof, to estimate the fair value of our common stock in connection with our accounting for granted stock options and other awards, as the fair value of our common stock will be determined based on the quoted market price of our common stock.

Emerging Growth Company and Smaller Reporting Company Status

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act (the "JOBS Act"). As a result, we are able to take advantage of certain exemptions from various reporting requirements that are otherwise applicable to public companies that are not emerging growth companies, including delaying auditor attestation of internal control over financial reporting, providing only two years of audited financial statements and related management's discussion and analysis of financial condition and results of operations and reduced executive compensation disclosures.

We may remain an "emerging growth company" until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least $1.235 billion or (c) in which we are deemed to be a "large accelerated filer" under the rules of the SEC, which means, among other things, (1) the market value of our common stock that is held by non-affiliates exceeds $700.0 million as of June 30th and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. In particular, we have provided only two years of audited financial statements and have not included all of the executive compensation related information that would be required if we were not an "emerging growth company." As a result, the information that we provide to our stockholders may be different than what you might receive from other public reporting companies in which you hold equity interests. In addition, the JOBS Act provides that an "emerging growth company" can take advantage of an extended transition period for complying with new or revised accounting standards. We have elected not to "opt out" of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we can adopt the new or revised standard at the time private companies adopt the new or revised standard and may do so until such time that we either (1) irrevocably elect to "opt out" of such extended transition period or (2) no longer qualify as an "emerging growth company."

We are also a "smaller reporting company" as defined in the Securities Exchange Act of 1934. We may continue to be a smaller reporting company even after we are no longer an "emerging growth company". We may take advantage of certain of the scaled disclosures available to smaller reporting companies, including an exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002, and will be able to take advantage of these scaled disclosures for so long as our common stock held by non-affiliates is less than $250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than $100.0 million during the most recently completed fiscal year and our common stock held by non-affiliates is less than $700.0 million measured on the last business day of our second fiscal quarter.

Recently Issued Accounting Pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2 to our consolidated financial statements included elsewhere in this prospectus.

BUSINESS

Overview

We are a clinical-stage generative biology company pioneering the AI revolution in biotechnology and drug design and development. Our vision is to program biology to generate optimal therapeutics for the greatest impact on human health. Central to our vision is the Generate Platform, designed to be a therapeutic area and protein modality agnostic system integrating computational innovation with scalable biohardware to address therapeutic challenges beyond the reach of traditional technologies. We have built our Generate Platform to be a tight and fully-integrated loop (design–build–test–learn) to create proprietary, therapeutically relevant data and differentiated molecular solutions for the biological challenges we aim to address. In addressing these challenges, the Generate Platform can engineer solutions against therapeutic targets starting from either existing reference proteins or by suggesting completely novel ones without a reference starting point, also known as *de novo* design. The Generate Platform's therapeutic potential has been demonstrated by our successfully progressing three computationally engineered proteins into human clinical testing, the most advanced of which is GB-0895, an investigational long-acting anti-thymic stromal lymphopoietin ("TSLP") monoclonal antibody, which is enrolling patients in pivotal Phase 3 clinical trials for severe asthma. We also expect to advance two additional computationally generated oncology product candidates into Phase 1 clinical trials in
.

Biology is an information science. DNA encodes biological function through the way its sequence determines the structure and activity of the molecules it produces, which, in principle, makes biology programmable. In practice, however, the immense complexity of biology has made programming it very difficult. Historically, drug discovery has emphasized two general approaches to manage this complexity. One approach was an intentional, mechanically guided design approach at low-throughput. The other was a high-throughput experimental exploration approach that was generally less able to encode specific intent. We believe that dramatic reductions in the cost of compute and the cost of making and measuring DNA and proteins enable a new paradigm: intentionality at scale. In this paradigm, our generative models learn generalizable design principles from data to generate hypotheses at scale, and scalable experimental systems verify those hypotheses. The Generate Platform was built to implement this paradigm, generating large numbers of specific molecular and biological hypotheses in response to pre-specified therapeutic objectives and rapidly testing them. We believe intentionality at scale is foundational to achieving programmable biology: enabling systematic generation of medicines across therapeutic areas and protein modalities while producing proprietary data that improves our generative models over time.

The Generate Platform integrates generative and predictive models that learn design principles from proprietary data—*e.g.*, diffusion-based models (such as our Chroma model) and graph neural networks, among other architectures—with advanced experimental biohardware systems for scalable verification. Our biohardware systems include scalable DNA assembly, rapid protein production, and high-throughput, multiplexed assay miniaturization enabling us to measure up to billions of molecules per generation cycle, as well as a cryogenic electron microscopy ("Cryo-EM") core for high-content structural data generation, which has produced more than 250 structures in 2025 alone. These capabilities significantly reduce the cost and time per assay data point, tightening the loop between generative models and real-world biological verification.

We refer to the distinct biological and molecular capabilities of the Generate Platform as "modular capabilities" or "modules." Our modules are designed to be deployed individually or in combination to engineer differentiated therapeutic candidates. We have successfully translated these modular capabilities to create programs and product candidates with therapeutic potential. For example, our lead product candidate, GB-0895, utilizes our binding affinity and developability optimization modules, and is currently enrolling patients in Phase 3 clinical trials for severe asthma and is also being evaluated in a Phase 1b clinical trial for COPD. We used binding affinity and developability optimization modules, as well as additional modules, including functional optimization, to engineer our other product candidates, including GB-4362 and GB-5267. Investigational New Drug applications ("INDs") were submitted for both GB-4362 and GB-5267 in early December 2025, and, subject to receiving the U.S. Food and Drug Administration's ("FDA") authorization to proceed, we expect to dose the first patient for both programs in
.

Our lead product candidate, GB-0895, an investigational long-acting anti-TSLP monoclonal antibody in development for severe asthma, is intended to be dosed every six months ("Q26W"). Severe asthma represents a substantial unmet medical need, with industry sources suggesting only 15% to 25% of eligible patients receive biologic therapy. There are adherence and persistence challenges with existing

shorter-acting biologic agents and GB-0895's potential Q26W dosing regimen is designed to reduce injection frequency to address these challenges. We have engineered GB-0895 to have ultra-high binding affinity, reaching an estimated twenty-fold improvement over tezepelumab (106 femtomolar binding affinity) and a YTE amino acid modification, a clinically-validated half-life extension technology. A YTE amino acid modification is a specific change made to three amino acids (M252Y/S254T/T256E) in an antibody's fragment crystallizable ("Fc") region. Preclinical and Phase 1 clinical data have demonstrated favorable safety results, long half-life (mean terminal half-life of approximately 98 days), and suppression of key biomarkers, such as blood eosinophils ("EOS"), fractional exhaled nitric oxide ("FeNO"), IL-5, and IL-13, supporting its potential Q26W dosing regimen. We are currently enrolling patients in two parallel global Phase 3 clinical trials for GB-0895 initiated in December 2025 (SOLAIRIA-1 and SOLAIRIA-2) for severe asthma, with full enrollment expected by .

In parallel, we are currently conducting a Phase 1b clinical trial for moderate-to-severe chronic obstructive pulmonary disease ("COPD") with expected data in . COPD is a widespread and often fatal lung condition. Current biologics target patients with higher eosinophil counts, leaving the majority of patients without an approved biologic option. The Phase 1b COPD trial for GB-0895 is evaluating safety, tolerability, pharmacokinetics ("PK"), pharmacodynamics ("PD") and immunogenicity. Preliminary data showed biomarker reductions and a PK profile consistent with our earlier Phase 1 trial for GB-0895 for the treatment of mild-to-moderate asthma, supporting an extended dosing interval in COPD. We plan to evaluate multiple approaches to determine the optimal development path for GB-0895 for the treatment of COPD, taking into account expected clinical timelines, regulatory feedback, costs and the clinical data from our Phase 1b trial.

In addition to progressing GB-0895, we are advancing additional programs and product candidates that leverage the Generate Platform's modular capabilities. These include GB-4362, a systemically administered monoclonal antibody designed to neutralize free monomethyl auristatin E ("MMAE") as an adjunctive therapy to antibody-drug conjugate ("ADC") molecules with an MMAE payload, as well as GB-5267, an armored, MUC16-directed CAR-T cell therapy candidate developed in collaboration with Roswell Park Comprehensive Cancer Center ("Roswell Park"), for solid tumors, initially targeting platinum-resistant ovarian cancer. Beyond these product candidates, we are advancing additional preclinical programs, including a next-generation ADC that is being developed as an internal program, and a bispecific T-cell engager that is being developed in collaboration with The University of Texas M.D. Anderson Cancer Center ("MD Anderson"). In addition, the Generate Platform's modular capabilities underpin the undisclosed programs being developed in collaboration with Amgen Inc. ("Amgen") and Novartis Pharma AG ("Novartis").

We continue to advance our Generate Platform by investing in computational and biohardware innovation to scale productivity, unlock new modular capabilities and create differentiated future programs and product candidates. This should allow us to address important unmet patient needs with validated modules that offer scalable impact, at low marginal cost. Additionally, we intend to opportunistically utilize partnerships and collaborations to leverage our capabilities with sophisticated collaboration partners to work collectively to solve significant challenges, while improving the capabilities of the Generate Platform. In addition, we also intend to opportunistically explore various collaboration solutions to maximize value, secure capital, and direct our technology towards diverse therapeutic applications.

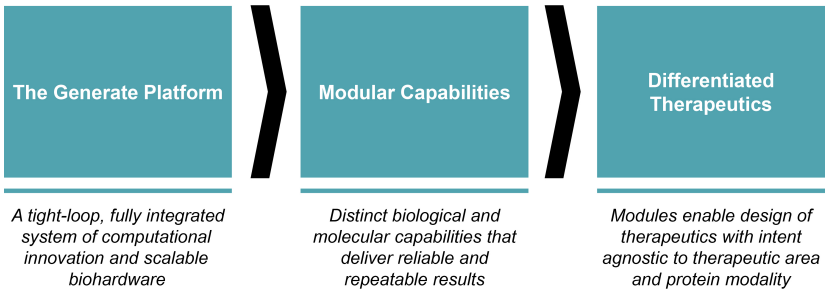
We are led by an experienced team of executives with backgrounds in leading pharmaceutical and life sciences companies and academia and deep experience in generative biology and computational sciences, supported by a distinguished board of directors. We were founded in 2018 by Flagship Pioneering, bringing together advancements in generative biology and computational protein science.

The Generate Platform and Our Modular Capabilities

Since inception, the Generate Platform was designed to create differentiated protein therapeutics and unlock the promise of a new method of designing drugs through a concept we call programmable biology. For biology to be programmable, it means that we must be able to design, write and execute biological functions with pre-specified intent, across therapeutic areas and protein modalities.

Our Generate Platform is designed to implement intentionality at scale by coupling AI models that generate large numbers of design hypotheses with scalable biohardware that verifies them. Each time we engineer, build and then test a set of hypotheses, a process which we refer to as a generation cycle, we generate experimental data that is intended to improve the Generate Platform. We package certain of these learnings into reusable modules—validated capabilities that can be applied across targets and modalities towards differentiated therapeutics.

The Generate Platform is designed to generate differentiated therapeutics

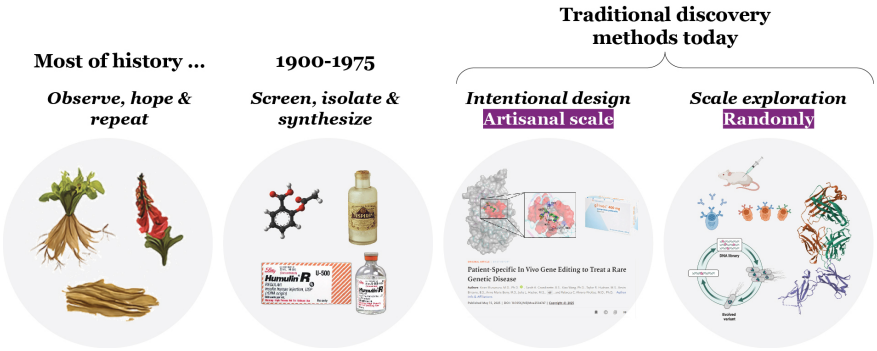


Our Generate Platform has enabled us to develop numerous modular capabilities, many of which have already demonstrated the ability to successfully translate computationally engineered proteins into human clinical testing, including our lead product candidate GB-0895, which is currently enrolling patients in Phase 3 clinical trials for the treatment of severe asthma. In addition, we are currently exploiting our modular capabilities for other potential therapeutic applications, including for use in oncology and other historically difficult to treat diseases.

Background and Context

Despite significant innovation over many decades, we believe drug discovery remains constrained by biology's complexity and the limits of conventional tools to navigate it efficiently. Traditional drug discovery methods have often relied on intentional, mechanistic hypothesis-driven molecular design, which is typically pursued in an artisanal manner and therefore with low-throughput. Alternatively, traditional drug discovery methods have also relied on high-throughput molecular exploration—from early small molecule screens to modern library display-based libraries—to find "the needle in the haystack." These techniques gain scale by generating large numbers of variants, but are less able to code specific intent.

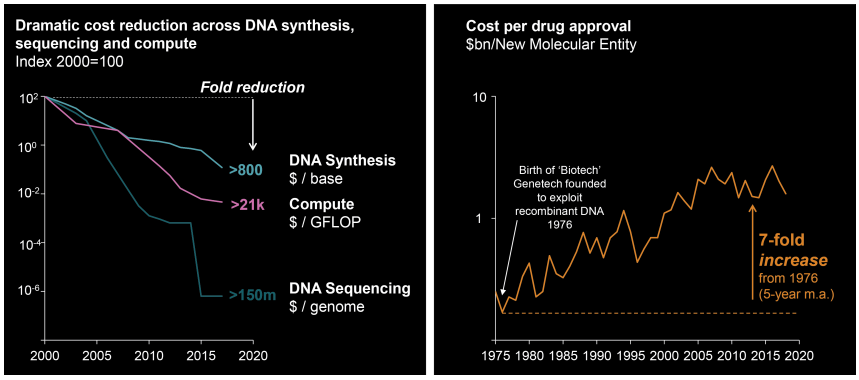
Traditional drug discovery methods today are generally limited to intentional design at low scale or random at scale exploration



While traditional drug discovery techniques have improved over time and the cost of compute, as well as DNA synthesis and sequencing, have fallen substantially, the unit economics of developing new medicines has not improved in a meaningful way. In fact, published analyses, as illustrated in the figure below, suggest that the inflation-adjusted cost per new drug approval has increased over time, including over the last several decades.

We believe the convergence of cost reduction trends in compute and DNA synthesis and sequencing, as a result of advancements in recombinant DNA technology and synthetic biology, enables intentionality at scale. This means that AI models can learn generalizable design principles from data to generate hypotheses at scale, and scalable experimental systems can verify those hypotheses at scale. We believe we are well positioned to capitalize on these advancements by utilizing our Generate Platform to provide intent and scale, which we believe unlocks a potentially new paradigm of drug design exemplified by improved speed, lower cost and enhanced probability of success. Our Generate Platform was built to implement this paradigm and we have been a pioneer in demonstrating the ability to leverage the computational revolution to scale the number of intentionally designed protein ideas to the millions. This has unlocked a large potential solution space designed to find the optimal protein that can deliver the greatest impact to patients in a given therapeutic application.

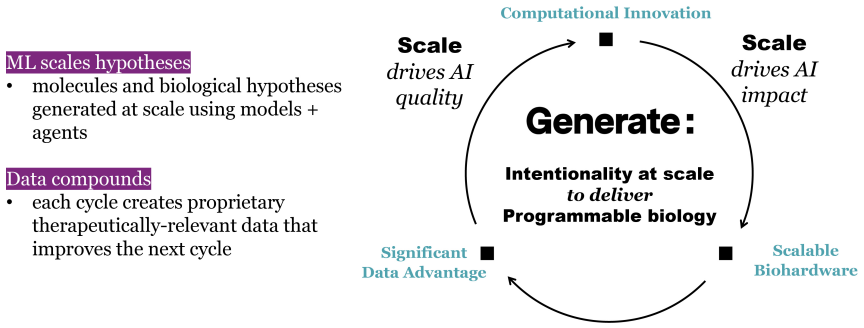
There has been significant cost reductions in DNA synthesis, sequencing and compute while the cost per new medicine has increased



The Generate Platform

We built the Generate Platform on a foundation of integrating computational innovation with scalable biohardware to create a significant data advantage and drive differentiated molecular solutions for the biological and therapeutic challenges we aim to address, as illustrated in the figure below.

The Generate Platform is designed to systematically decode and comprehend biology at speed and magnitude

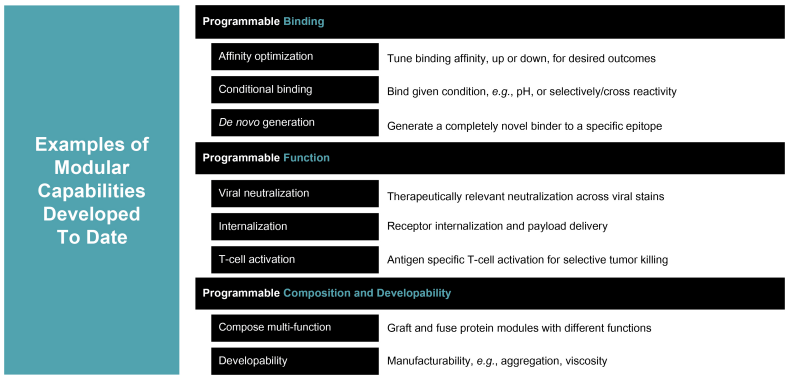


Our machine learning team includes pioneers in generative protein design, demonstrated, for example, by our November 2023 publication in *Nature* of one of what we believe to be the first diffusion protein models the Chroma model, as well as being among the leaders in graph neural networks for protein design. In parallel, we have invested in biohardware designed to deliver proprietary, therapeutically relevant data at scale. Our biohardware systems include scalable DNA assembly, rapid protein production (including cell-free protein synthesis), and multiplexed assay systems (including mRNA display, assay miniaturization and microfluidics) designed to measure large libraries efficiently. Complementing these scalable measurements, we have a Cryo-EM core that includes four microscopes, which has allowed us to scale protein complex structure determination (the structure of proteins interacting with one another) to fill highly valuable data gaps. We have generated more than 250 structures in 2025 alone and we continue to scale this capability while expanding to novel data types, including protein conformational ensembles (which is the capture of proteins as they move naturally). These capabilities allow us to significantly reduce the cost and time of each generation cycle and per assay data point, tightening the loop between our generative models and the verification of their hypotheses in the real-world biological setting. This makes subsequent ideas proposed by our models better and creates a compounding advantage over time.

Modular Capabilities

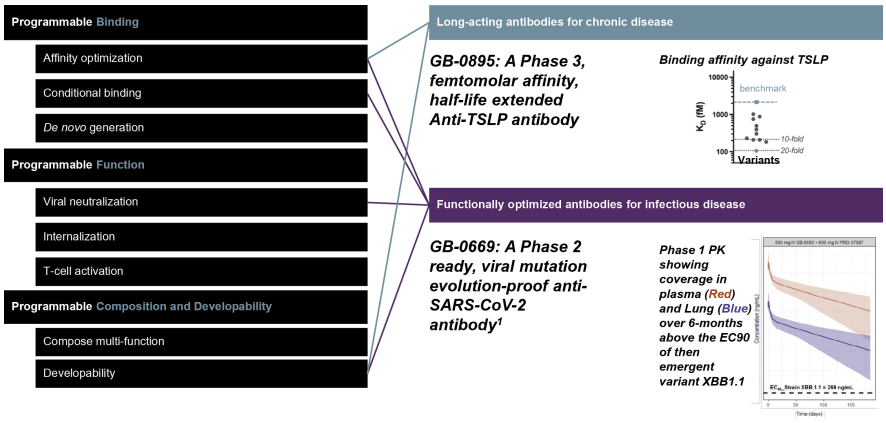
To date, we have deployed our Generate Platform to establish numerous modular capabilities, many of which we can now reliably and repeatably direct towards developing future therapeutic candidates. Our initial focus in building modular capabilities was on one of the most fundamental ways proteins mediate biology: binding. We have leveraged this starting point to expand our capabilities to include (i) binding with context, including selective and conditional target binding, and (ii) protein design for a desired function; in parallel, we have invested in a set of capabilities focused on developability. We have already seen the translational impact of our established modules in our first three clinical product candidates, as well as in two additional product candidates that are anticipated to enter clinical trials in . Examples of our current modules and the intended purposes are summarized in the figure below.

Examples of modular capabilities developed to-date



We have built these modular capabilities with the intent to explore and decode biological challenges with a direct link to a therapeutic opportunity. For example, many biologics require a drug developer to "tune" the binding of antibodies to a target, otherwise known as binding affinity. Previously, this would have taken multiple cycles of library generation and screening, often with limited ability to reliably reach a specific affinity window, such as very high affinities in picomolar or femtomolar ranges. In contrast, our generative models propose new proteins with intent to increase, decrease or engage in selective binding depending on what is needed in the given program context. These diverse modules can be used alone, or in combination with one or more other modules, to generate unique proteins that are designed to address important therapeutic challenges. As shown in the figure below, two examples of proteins we designed that utilize our modules include our lead product candidate, GB-0895, and a functionally optimized antibody to neutralize a virus that has otherwise demonstrated meaningful resistance against all other approved antibody therapies. These examples reflect our deep conviction: programmable biology is only possible when therapeutic intent, computational engineering and biological data generation operate as a unified system to enable intentionality at scale and a compounding data advantage over time.

Application of modular capabilities to therapeutic applications



[1] Development paused for commercial reasons.

As we develop our Generate Platform and its modular capabilities, we are focused on translating their potential into meaningfully differentiated therapeutics. Initially, we pursued therapeutic opportunities in which we believe our modular capability or combinations of modular capabilities are likely to solve a molecular challenge in areas of well-understood biology. We believe that this approach allowed us to shift risk to the preclinical setting, where we can quickly identify differentiated proteins with the desired attributes. If we successfully engineer desired proteins, we believe it will unlock our ability to develop therapeutic candidates that can be moved into clinical testing with lower risk and a potentially differentiated product profiles, thereby creating the potential for outsized patient impact and value. One or more of these modules can also be deployed to address therapeutic opportunities with potential partners, enabling an additional value generation route for us, as exemplified by our Amgen and Novartis collaborations.

Potential Therapeutic Impact

We use the Generate Platform to engineer differentiated product candidates for therapeutic opportunities. Using a modular approach, which combined our binding affinity and developability optimization capabilities, we developed our lead product candidate, GB-0895. We engineered GB-0895 to be a long-acting, anti-TSLP monoclonal antibody for severe asthma, COPD and other indications, intended for Q26W dosing.

Across chronic inflammatory diseases, there is a significant unmet need for biologic solutions that improve patient adherence and outcomes. We believe long-acting therapies like GB-0895, if approved, could address this need. To effectively achieve the desired clinical response over our proposed Q26W dosing schedule, we believe an anti-TSLP antibody must have both ultra-high binding affinity to sustain target engagement and an extended half-life to persist in the body. Most antibodies do not remove their target from the body; rather, they simply occupy the target to prevent its activation. If a lower-affinity antibody dissociates, the target may become active again, negatively impacting the clinical response.

Our PK/PD modeling predicted that even with a validated half-life extension technology, such as a YTE mutation, reaching the proposed dosing interval would still require femtomolar binding affinity to the TSLP target. We used our Generate Platform to engineer, in just two generation cycles, an antibody that was designed with these characteristics, incorporating 106 femtomolar binding affinity—an estimated 20-fold improvement over tezepelumab, based on published data—and the half-life extension technology.

We further applied our binding affinity and developability optimization modules to an investigational antibody targeting IL-13 currently in Phase 1 clinical trials in healthy volunteers, and have engineered several other product candidates that we believe are valuable and validated targets in chronic disease. These include antibodies targeting TL1A and IL-23p19 for inflammatory bowel disease and OX40L for several immune conditions. In each case, we have observed 20- to 500-fold improvements in binding affinity relative to benchmark antibodies while retaining desired specificity and developability characteristics. Beyond Immunology and Inflammation indications, we have applied this technology to optimize binding of antibodies, for example, to small molecules with our investigational MMAE product candidate, GB-4362, which is being developed as a combination partner to ADCs with MMAE payloads. We submitted an IND for GB-4362 in early December 2025.

In addition to binding affinity optimization and developability, we deployed other modular capabilities to a variety of additional programs. Our first clinical product candidate, GB-0669, required us to use our cross-reactive binding, viral neutralization and binding affinity optimization and developability modules to enable what we believe was the first clinical monotherapy candidate targeting the variant-resistant S2 domain on the spike protein of SARS-CoV-2. We have more recently applied these modules to optimize for chimeric antigen receptor (“CAR”) function and expression in our collaboration with Roswell Park (as defined below), which resulted in the GB-5267 product candidate. Roswell Park submitted an IND for GB-5267 in early December 2025.

Through deploying our Generate Platform towards therapeutic opportunities, we have seen a significant impact on the speed, cost and probability of success of drug design and development as summarized in the below figure.

Impact of the Generate Platform relative to traditional drug discovery

	Traditional drug discovery *laborious, high-cost exploration*		Generate: programmatic, at-scale prosecution
Time to proof of concept	6 - 8 years	❯	3 - 5 years[1]
Cost to proof of concept	$380mm	❯	$25 - 60mm[1]

Generate demonstrated success in translating our technology to product candidates:
- 8 programs successfully reached candidate nomination
- Created 5 clinical / clinic-ready product candidates
- 2 / 2 product candidates for which we initiated proof of concept trials achieved clinical proof of concept

[1] Referring to approximate time and R&D cost from the first generation cycle to clinical proof of concept for GB-0895 and GB-0669.

Building on these efficiency gains, we are deploying our reusable modular capabilities to tackle increasingly complex biological challenges, such as engineering receptor-mediated internalization or conditional binding, each tightly linked to significant therapeutic opportunities. Capabilities such as these are being deployed in our early-stage pipeline. In parallel, we continue to innovate and invest across the Generate Platform to further lower the time and cost required to design, build and test each new hypothesis, so we can learn faster from real-world biology and build a compounding advantage over time. We believe this will expand the modular capabilities we can deploy, broaden the set of challenges we can reliably address, and ultimately translate into differentiated future product candidates.

Our Strategy

Our vision is to program biology to generate optimal therapeutics for the greatest impact on human health. We believe that this vision will be enabled by deploying generative biology at scale. Since our formation, we have focused on investing in our differentiated Generate Platform to unlock a new way of designing and developing drugs by integrating computational and experimental innovations. We believe these investments move us closer to a paradigm of programmable biology where drug discovery becomes more akin to engineering than traditional methods.

To move the company toward our vision, we focus on the following key strategic initiatives:

1. **Progress our advanced clinical-stage lead product candidate, GB-0895.**

   GB-0895 is the first known anti-TSLP monoclonal antibody designed to be dosed every six months (“Q26W”) to initiate Phase 3 development. TSLP is a key epithelial cytokine implicated in the pathogenesis of severe asthma. We believe that targeting TSLP has demonstrated a strong clinical rationale for reducing exacerbations and improving disease control. The clinical rationale for the inhibition of TSLP in patients with severe asthma is based on the FDA approval of tezepelumab, an anti-TSLP monoclonal antibody for severe asthma patients, which is dosed every four weeks (Q4W). We are currently enrolling patients in two Phase 3 trials, SOLAIRIA-1 and SOLAIRIA-2, in patients with severe asthma. The first patient was dosed in our SOLAIRIA-1 Phase 3 clinical trial on .

   GB-0895 offers what we believe is a unique opportunity for us to unlock a “pipeline-in-a-product.” In parallel to our Phase 3 trials in severe asthma, we are assessing GB-0895 in an ongoing Phase 1b expansion trial in moderate-to-severe COPD patients. Given the safety and tolerability results seen in our Phase 1b trial as of the November 7, 2025 data cutoff date, we see potential for GB-0895 as a biologic in COPD, which is an area of high unmet need. We plan to evaluate multiple approaches to determine the optimal development path for GB-0895 for the treatment of COPD, taking into account expected clinical timelines, regulatory feedback, costs and the clinical data from our Phase 1b trial. As part of such evaluation, we plan to seek

engagement with regulatory authorities to discuss our development strategy and obtain regulatory feedback on our proposed approach during .

With the broader relevance of the TSLP blockade in Type 2 and Non-Type 2 inflammation in asthma and other epithelial barrier-driven conditions, we also believe there is potential for multiple longer-term expansion opportunities for GB-0895 beyond lower airway diseases. In this regard, we may also seek to evaluate GB-0895 in combination with other targeted therapies, such as IL-13 and OX40 ligand, to address residual disease activity in selected immunology and inflammation ("I&I") patient populations.

Our GB-0895 development efforts are supported by our highly experienced clinical development team, who brings deep Phase 3 expertise and a proven track record in designing and executing pivotal trials across respiratory and immunology indications.

2. **Advance our next wave of clinical and preclinical product candidates in a broad range of indications, starting with oncology.**

We are applying our Generate Platform to engineer and develop additional product candidates in areas of high unmet need, with an initial focus on oncology. INDs for GB-4362 and GB-5267 were submitted in early December 2025. These product candidates are among the initial potential clinical applications of the Generate Platform in areas of significant unmet need outside of I&I. Should either product candidate prove successful in their respective Phase 1 clinical trials, we believe there could be opportunities to push directly toward registration-intent trials soon thereafter.

In addition to these two product candidates, we are exploring whether to advance additional preclinical oncology programs, including a potential bispecific T-cell engager ("TCE") and a potential ADC molecule.

3. **Advance our Generate Platform to scale productivity, unlock new modular capabilities and translate additional differentiated programs and product candidates.**

We plan to continue investing in the development of computational and biohardware innovations to achieve our vision of programming biology and unlocking differentiated therapeutic applications. We believe that these investments will enable the identification and validation of new modular capabilities, which can be used to create additional differentiated product candidates to address important unmet patient needs. Once validated, these modules generally have the potential to offer scalable impact at low marginal cost, supporting efficient future therapeutic development.

As we consider additional programs, we intend to prioritize opportunities that we believe our Generate Platform has a differentiated advantage compared to traditional drug discovery methods. We anticipate that our investments have the potential to yield several new programs over the next .

4. **Establish additional partnerships and collaborations to maximize value from and for our Generate Platform.**

Given the breadth of our capabilities, we intend to continue to evaluate partnerships and collaborations designed to maximize the value of our Generate Platform and accelerate the impact of our product candidates. We may engage in additional strategic collaborations similar to our Amgen and Novartis collaborations, which enable us to leverage our distinct capabilities to help our collaboration partners solve significant challenges that seem to be unachievable with traditional methods, while at the same time allowing us to improve our own Generate Platform capabilities. We may also enter into certain research or technology collaborations, such as our existing collaborations with Roswell Park and MD Anderson, which extend the Generate Platform's reach into valuable applications by leveraging partner expertise across modalities that are not fully protein-based or that require external capabilities in other areas of significant unmet need (*e.g.*, CAR-T manufacturing, adding payload or linker technology to an internally developed ADC and other research and technological expertise). Lastly, as we advance our programs and product candidates, we may also opportunistically explore licensing, commercialization and other partnership and collaboration arrangements with global pharmaceutical companies to enhance our development or commercialization efforts. These types of partnership, collaboration and other arrangements could enable us to pursue additional programs and product candidates, secure additional capital and maximize the potential of our technology toward solutions for patients suffering from a wide range of diseases.

Our Team

Our company is led by a team of executives who collectively bring decades of experience from leading pharmaceutical and life sciences companies and academia and deep experience in generative biology and computational sciences. Our Chief Executive Officer, Michael Nally, M.B.A., joined us in 2021 after an 18-year career at Merck & Co., Inc. ("Merck"), where he served as Chief Marketing Officer overseeing global strategy for a $40 billion portfolio and as President of Global Vaccines. Our Co-Founder and Chief Technology Officer, Dr. Gevorg Grigoryan, Ph.D., is a leading protein scientist who drives the development of our Generate Platform and has authored more than 50 peer-reviewed publications in journals including *Nature*, *Science* and *PNAS*. Our Chief Financial Officer, Dr. Jason Silvers, M.D., J.D., brings more than 20 years of finance experience, previously serving as a Partner at Goldman Sachs & Co. LLC, where he advised on more than $400 billion in global transactions and where he most recently co-led the EMEA healthcare investment banking group. Dr. Laurie Lee, M.D., our Chief Medical Officer for Immunology & Inflammation, leads late-stage clinical development across our immunology portfolio and previously held senior R&D roles at CSL Behring LLC and GSK plc, where she led development of the Trelegy Ellipta asthma program from Phase 2 through global regulatory submissions that led to approval. Dr. Dinesh de Alwis, Ph.D., our Senior Vice President and Head of Clinical Drug Development, is an accomplished drug developer with more than 25 years of industry experience, including a decade at Merck contributing to the development of pembrolizumab.

Beyond our exceptional leadership team, we have assembled a multi-disciplinary team with deep scientific, clinical, technological, and operational expertise across biotechnology, machine learning and drug discovery and development. In this regard, as of December 31, 2025, we employed M.D.s and Ph.D.s with advanced degrees and experience across multiple therapeutic areas and in fields such as biologic engineering, biochemistry, biomedical engineering, biophysics, biostatistics, chemistry, physics, computer science and PK/PD.

Our leadership team is guided by a board of directors with distinguished scientific and industry leadership, including Dr. Noubar Afeyan, Ph.D., Founder and CEO of Flagship Pioneering, Inc. ("Flagship Pioneering"); Dr. Frances Arnold, Ph.D., Nobel Laureate and Professor at the California Institute of Technology; Stéphane Bancel, Chief Executive Officer of Moderna, Inc.; Marsha Fanucci, former Chief Financial Officer of Millennium Pharmaceuticals, Inc.; Jane Mendillo, former Chief Executive Officer of Harvard Management Company; Paul Parker, Managing Partner at Flagship Pioneering; Dr. Nancy Simonian, M.D., former Chief Executive Officer of Syros Pharmaceuticals, Inc.; Rupert Vessey, BM, BCh. DPhil, FRCP, Chief Scientist and Executive Partner of Flagship Pioneering and former President, Research and Early Development at Bristol-Myers Squibb Company; and Michael Nally, M.B.A., our Chief Executive Officer. The Company's board of directors (the "Board") collectively provide extensive experience in drug discovery, commercialization, investment and governance.

Our Beginnings: Generate and Flagship Pioneering

Flagship Pioneering founded Generate in 2018 as Flagship VL56, Inc., working together with Dr. Gevorg Grigoryan, Ph.D., our founding Chief Technology Officer. In 2019, Flagship VL56, Inc. was combined with complementary generative biology explorations from another Flagship Company, Flagship VL57, Inc. Flagship Pioneering invents and builds platform companies, each with the potential for multiple products that transform human health, sustainability and beyond. Generate's founding team is the Flagship Pioneering origination team led by co-founders Noubar Afeyan, Ph.D., Founder and Chief Executive Officer of Flagship Pioneering, Dr. Geoffrey von Maltzahn, Ph.D., Dr. Avak Kahvejian, Ph.D., Dr. Molly Gibson, Ph.D., other scientists at Flagship Pioneering, and Dr. Grigoryan.

Generate was based on an exploration of the following question: What if we could generate novel protein therapeutics using generative AI tools, without having to discover them through trial and error? The team set out to explore whether advances in generative AI, large-scale protein sequence and structural data, and high-dimensional modeling could unlock a systematic, AI-first approach to creating new therapeutic proteins.

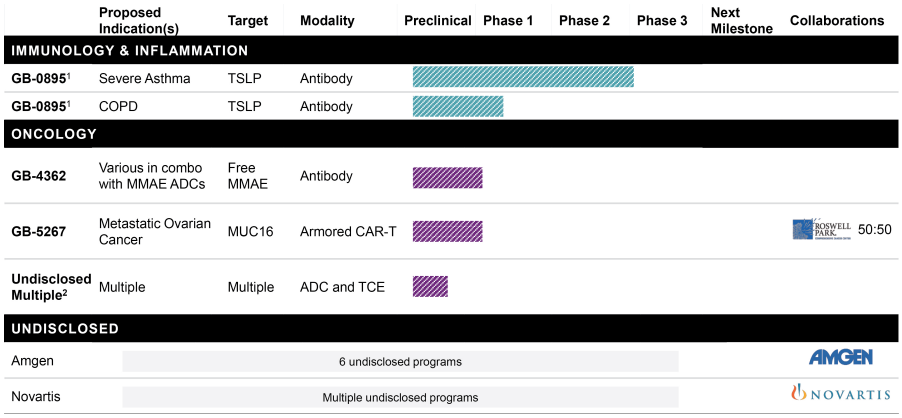
Recognizing the deep scientific synergy between Flagship Pioneering's data-driven exploration and Dr. Grigoryan's pioneering insights into the learnable, recurring structural patterns that govern how proteins fold and function, Flagship Pioneering brought these efforts together to launch the world's first generative biology platform capable of learning the underlying rules of protein function and generating novel therapeutic candidates on demand. Since our inception, we have continued to build on this foundation, advancing our platform, expanding our discovery and development capabilities, and assembling a leadership team committed to translating this new approach into transformative medicines for patients.

Translation of our technology into differentiated therapeutics—the first wave of product candidates

We leveraged our initial Generate Platform modular capabilities to develop our first product candidates with differentiated features that focused on targets with well validated disease biology. This approach allowed us to significantly decrease the time and, we believe, the risk to advance our first product candidates to late-stage clinical development.

Our current pipeline of product candidates is summarized in the figure below:

Our pipeline



[1] We have been developing the GB-0895 product candidate with financial and scientific support from Pioneering Medicines 02, Inc. ("PMCo"), an affiliate of Flagship Pioneering, Inc. ("Flagship Pioneering"). See the section titled *"—License and Collaboration Agreements—Collaboration Agreement with PMCo."*
[2] One program includes 50:50 collaboration with MD Anderson.

GB-0895: An Anti-TSLP Monoclonal Antibody

Overview

GB-0895 is long-acting anti-TSLP monoclonal antibody intended to be dosed every six months ("Q26W") designed using our Generate Platform to address unmet needs in respiratory diseases. We are initially developing for the treatment of severe asthma. TSLP is a clinically and commercially validated target in severe asthma and has demonstrated broad potential in Type 2 and Non-Type 2 inflammatory diseases in clinical trials by third-parties. We are currently enrolling patients in two Phase 3 clinical trials of GB-0895 for the treatment of patients with severe asthma (SOLAIRIA-1 and SOLAIRIA-2) following promising data in mild-to-moderate asthma patients in our Phase 1 clinical trial. In parallel, we are also assessing GB-0895 in an ongoing Phase 1b expansion trial in moderate-to-severe COPD patients. Preclinical and clinical data demonstrated ultra-high affinity inhibition of TSLP signaling, with a 106 femtomolar binding affinity for TSLP and a mean terminal half-life of approximately 98 days in adults with mild-to-moderate asthma, which, together with quantitative PK/PD modeling, support evaluation of a subcutaneous Q26W dosing regimen. If approved, this dosing regimen, which is being evaluated in our Phase 3 clinical trials, would represent a potentially significant improvement to approved biologic therapies, which are typically dosed every two to eight weeks.

Mechanism of Action and Rationale

TSLP is an epithelial cell-derived cytokine implicated in initiating and amplifying multiple pathways that drive lung inflammation in severe asthma. TSLP protein expression is increased in the airway epithelium and lamina propria of patients with asthma compared with healthy individuals, and higher

TSLP levels are associated with more severe disease and airflow obstruction. TSLP gene expression and a T helper 2 (“Th2”) gene-expression signature have been observed in bronchial biopsy specimens from patients with asthma, and increased TSLP expression has been shown to correlate with reduced forced-expiratory volume in one second/forced vital capacity (“FEV_1/FVC”) ratios. Collectively, we believe these findings support a role for TSLP as an alarmin at epithelial barriers such as the lung that initiates inflammation involving multiple downstream cytokines, including IL-5 and IL-13, which in turn contributes to clinical manifestations of asthma. Given this that TSLP is produced at the top of the inflammatory cascade, or prior to IL-5 and IL-13, specific targeting of TSLP has the potential to broadly modulate airway inflammatory responses across diverse inflammatory phenotypes.

Technology Approach and Molecular Characteristics

GB-0895 was designed using our Generate Platform, which was applied to optimize multiple molecular attributes, including affinity and developability. In addition to this approach, GB-0895 was also engineered to incorporate YTE half-life extension technology in the fragment crystallizable (“Fc”) region, which was intended to enhance binding to the neonatal Fc receptor (“FcRn”) and prolong systemic exposure. In a Phase 1 clinical trial in adults with mild-to-moderate asthma, GB-0895 demonstrated a mean terminal half-life of approximately 98 days.

In preclinical studies, GB-0895 also exhibited ultra-high affinity binding to TSLP, with femtomolar binding (106 fM), which represents an estimated 20-fold improvement over published tezepelumab data. We believe that the unique combination of ultra-high affinity TSLP binding and extended half-life is the critical enabler for GB-0895’s sustained neutralization of TSLP and downstream pathway suppression over extended intervals. Most antibodies do not remove their target; they simply “occupy” it to prevent it from becoming active. If the antibody dissociates, as lower affinity antibodies frequently do, then the target once again becomes “active” and can negatively impact the clinical response. We determined through PK/PD modeling that if we applied a validated half-life extension technology (in this case a YTE mutation (M252Y/S254T/T256E)), femtomolar binding affinity to the TSLP target would likely still be required to reach a Q26W dosing regimen.

These engineered molecular properties—ultra-high affinity TSLP binding and YTE-mediated half-life extension—supported evaluating a Q26W dosing regimen of GB-0895 in patients with severe asthma and COPD. In our Phase 1 trial, GB-0895 demonstrated durable serum exposure and PD effects at the 300 mg dose, and our ongoing Phase 3 severe asthma product candidate is designed to assess whether a 300 mg six-monthly dosing regimen can provide clinically meaningful reductions in exacerbations and improvements in other outcomes.

GB-0895 for the Treatment of Severe Asthma

Asthma Disease Overview

Asthma is a heterogeneous disease characterized by chronic airway inflammation and variable respiratory symptoms, including wheezing, shortness of breath, chest tightness and cough, together with variable expiratory airflow limitation. The disease can be caused or triggered by various factors with both the immune system and the environment playing a role in the disease. The two main phenotypes of asthma are Type 2, typically allergen-driven with onset typically in childhood, and Non-Type 2 disease, typically environment-driven that is later-onset. Both types are assessed using eosinophils and fractional exhaled nitric oxide (“FeNO”) levels as biomarkers. Type 2 disease is characterized by inflammation driven by Th2 cytokines (including IL-4, IL-5 and IL-13) that increase production of immunoglobulin E (“IgE”), activate eosinophils, and raise FeNO levels, producing allergic or eosinophilic inflammation. In contrast, non-Type 2 asthma is characterized by Th1 and/or Th17-cell mediated inflammation rather than the Th2-cell mediated inflammation, resulting in lower eosinophil and FeNO levels. Non-Type 2 asthma patients typically do not respond well to inhaled steroids and have been poor candidates for biologics historically.

Asthma Market Opportunity

Asthma remains a major global health burden. In the United States alone, asthma affects approximately 27 million adults and five million children, making it one of the most common chronic respiratory diseases in the United States. Approximately 5% to 10% of all asthma patients have severe disease, defined as asthma that remains uncontrolled despite optimized treatment with high-dose inhaled corticosteroids plus additional controllers, or that requires such therapy to prevent loss of control. These patients often have symptoms that substantially impair quality of life, require multiple concomitant

medications (including bronchodilators and systemic corticosteroids), experience frequent exacerbations and incur substantial excess medical costs each year.

Within this severe segment, a large unmet need persists despite several approved biologics today. It is estimated that approximately 85% of people with severe asthma, or roughly 1.9 million individuals across the U.S., EU5, and Japan, meet eligibility criteria for at least one approved biologic; however, industry sources suggest only 15% to 25% of eligible patients are receiving biologic therapy. Poor adherence and persistence with existing agents, together with barriers to initiation, contribute to suboptimal symptom control, ongoing exacerbations and unnecessarily increased healthcare resource utilization.

Of these approved biologics, only one drug targeting the TSLP pathway, tezepelumab (marketed as TEZSPIRE by Amgen and AstraZeneca plc ("AstraZeneca")), has been approved to date for the treatment of severe asthma in patients 12 years and older and is the only severe asthma biologic without phenotype or biomarker limitations in its label, reflecting the position of TSLP at the top of the inflammatory cascade relative to downstream cytokines. Approximately 80% of patients with severe asthma have blood eosinophil counts <300 cells/μL, where the effectiveness of most approved biologics is reduced. Furthermore, approximately 40% of patients with severe asthma are estimated to have blood eosinophils ≤150 cells/μL, for which tezepelumab is the only approved, effective biologic option for these patients.

By contrast, biologic use is more established in certain other immune-mediated diseases. In psoriasis, for example, multiple biologics targeting the TNF, IL-12/23, IL-17 and IL-23 pathways are now becoming the standard of care for moderate-to-severe disease, and biologic penetration has reached approximately 45% of new starts in this population. We believe there is similar potential for biologic penetration to increase in severe asthma over time.

Despite relatively modest current penetration of biologic therapies in severe asthma, the asthma biologic therapeutics market is already substantial and is expected to grow as guideline-recommended use of advanced therapies expands. In 2024, global sales of biologics for severe asthma grew to approximately $9 billion and are projected to reach $13 billion by 2034. We believe that therapies capable of addressing a broad range of severe asthma phenotypes, including patients across eosinophil strata, and offering more convenient dosing regimens, will be well-positioned to drive this growth, subject to demonstration of safety and efficacy and to payer and access dynamics.

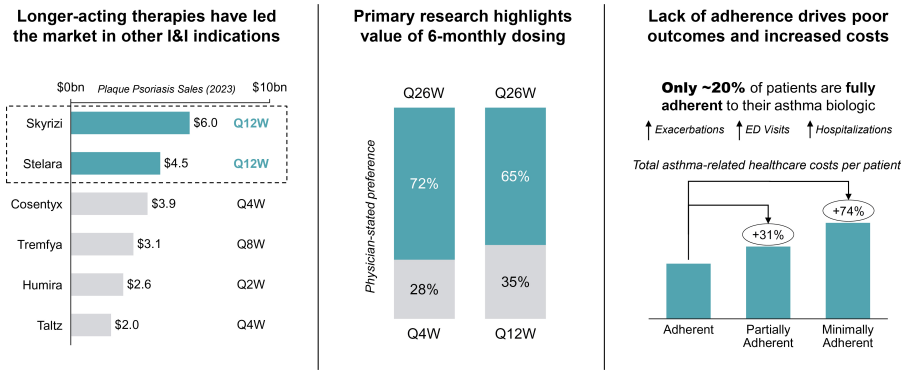
Asthma Unmet Need and Our Value Proposition

GB-0895 is designed to address several dimensions of unmet need, including the high burden of frequent dosing, challenges with adherence and persistence, and limited options for patients with lower blood eosinophil counts.

In the United States and other major markets, approved biologics for severe asthma include omalizumab (anti-IgE), mepolizumab and reslizumab (anti-IL-5), benralizumab (anti-IL-5 Rα), dupilumab (anti-IL-4Rα) and tezepelumab (anti-TSLP). Product labels and pivotal trial publications show that these biologics are generally administered subcutaneously or intravenously at intervals ranging from every two to eight weeks, with eligibility defined by combinations of exacerbation history, maintenance therapy requirements and biomarkers such as blood eosinophil counts, serum immunoglobin E ("IgE") levels and fractional exhaled nitric oxide. Tezepelumab is currently the only approved anti-TSLP biologic and the only severe asthma biologic without biomarker-based restrictions in its label, consistent with the position of TSLP at the top of the airway inflammatory cascade. In third-party clinical trials, tezepelumab has demonstrated clinical efficacy in severe asthma, as well as placebo-adjusted reductions in key biomarkers over 12 months including EOS (-50%), FeNO (-12%), IL-5 (-58%) and IL-13 (-45%).

Real-world data highlight the extent of adherence and persistence challenges with currently available biologics in severe asthma. In a large U.S. claims-based analysis of more than 10,000 patients treated with asthma biologics, only approximately 20% of patients were classified as adherent (defined as a patient taking their therapy 80% of the time) and roughly half of the patients discontinued treatment within 12 months. Non-adherent and discontinuing patients had substantially higher asthma-related and all-cause healthcare costs and greater healthcare utilization than adherent patients. Additionally, our primary market research, shown in the figure below, highlighted a strong physician-stated preference for a Q26W dosed anti-TSLP therapy.

Longer-acting therapies have demonstrated market leadership, have been preferred in market research by physicians and could address the existing adherence issue in asthma



We believe these observations suggest that, even after patients overcome barriers to initiating available biologics therapies, maintaining long-term use of regimens dosed every two to eight weeks can be challenging in routine practice, leading to avoidable exacerbations, hospitalizations and increased healthcare system costs. GB-0895's potential for a Q26W dosing regimen is designed to reduce the number of injections and treatment decisions required over time, and, if successfully developed and approved, may help address the key structural barriers to adherence and persistence.

We are not aware of any other TSLP inhibitor, beyond tezepelumab, that has entered Phase 3 development to date. We believe that GB-0895's combination of durable target suppression in the Phase 1 clinical trial, potential for a Q26W dosing regimen, potential speed to market, and positioning in severe asthma could differentiate it within the evolving landscape of Type 2 biologics and those targeting cytokines at the top of the inflammatory cascade.

Asthma Clinical Development

In its Phase 1 clinical trial for the treatment of mild-to-moderate asthma patients, GB-0895 demonstrated a favorable safety profile, long half-life and suppression of key biomarkers supportive of a Q26W dosing regimen using a single 300 mg subcutaneous injection:

- Long half-life showed sustained drug concentration for the full six-month period.
- EOS, FeNO, IL-13 and IL-5 biomarkers indicated deep and sustained reductions over six months.
- Total TSLP demonstrated target saturation.
- GB-0895 was generally well tolerated, with low ADA and no impact from ADA observed on PK profile.

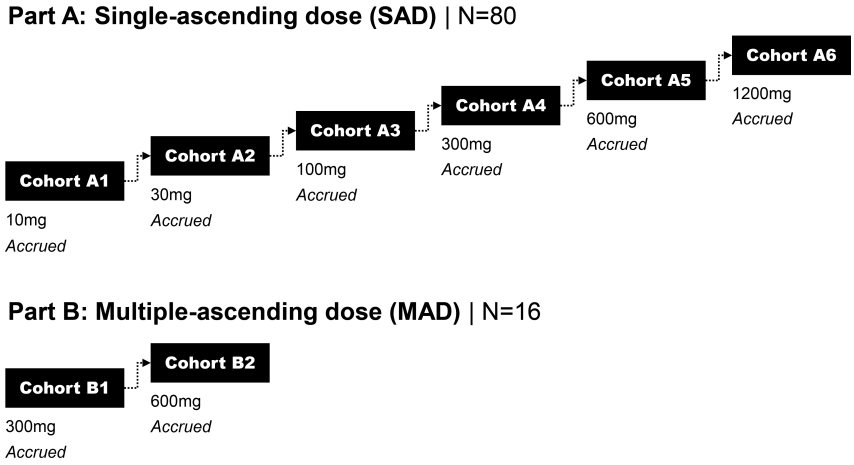
Phase 1 clinical trial

Overview

The Phase 1 clinical trial (GB-0895-101) of GB-0895 was a randomized, double-blind, placebo-controlled, first-in-human trial designed to evaluate the safety, tolerability, PK/PD and immunogenicity of GB-0895. The trial enrolled 96 adult subjects with mild-to-moderate asthma, with inclusion criteria requiring blood eosinophil levels of at least 150 cells/μL. GB-0895 was administered subcutaneously, and the trial was designed to identify a dose capable of sustaining PD effects for approximately six months to support Phase 3 dose selection, and, together with other support, potentially obviate the need for a separate Phase 2 dose-ranging trial.

As depicted in the figure below, the trial consisted of two parts: Part A (single ascending dose ("SAD")) and Part B (multiple ascending dose ("MAD")). Part A enrolled a total of 80 patients across six dose cohorts (10 mg, 30 mg, 100 mg, 300 mg, 600 mg and 1200 mg). Part B enrolled a total of 16 patients, and GB-0895 or a placebo was administered subcutaneously every 12 weeks for a total of two doses. The primary objective of the trial was to evaluate the safety and tolerability of GB-0895, with secondary objectives including characterization of PK, evaluation of the dose-response relationship for blood eosinophil suppression and assessment of immunogenicity. Exploratory objectives included evaluation of additional PD biomarkers and surrogates of clinical activity.

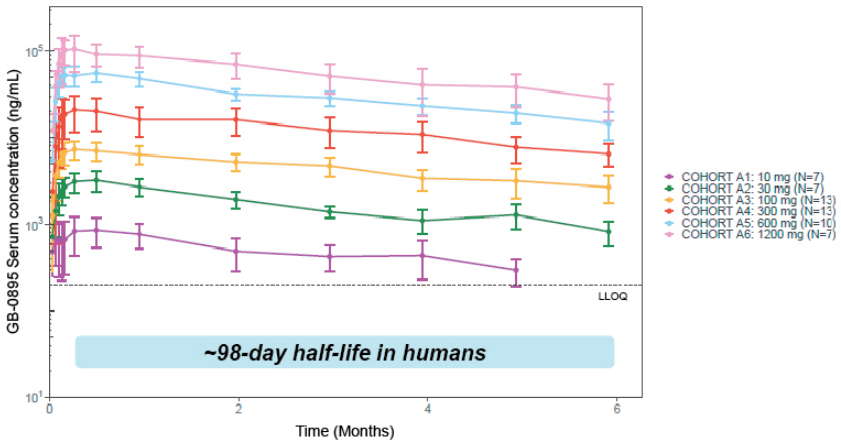
Overview of Phase 1 clinical trial design (GB-0895-101)



Pharmacokinetics

As shown in the figure below, PK data from the Phase 1 clinical trial demonstrated that GB-0895 exhibited dose-proportional PK without evidence of target-mediated drug disposition across the 10 mg to 1200 mg dose range, with a mean terminal half-life of approximately 98 days.

Observed mean serum concentrations of GB-0895 over six months by dose cohort

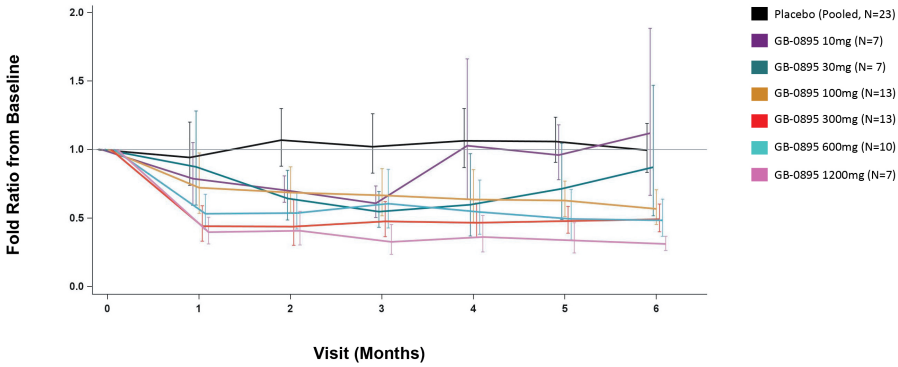


At the higher dose levels (300 mg, 600 mg and 1200 mg), serum GB-0895 concentrations remained well above the lower limit of quantification, noted by the dotted line on the above chart, throughout the six-month observation period, consistent with sustained systemic exposure. Low rates of anti-drug antibodies ("ADAs") were observed; treatment-emergent transient ADA responses occurred in a small number of subjects and did not affect PK half-life, as half-life was similar between ADA-positive and ADA-negative subjects.

Pharmacodynamics and Biomarker Suppression

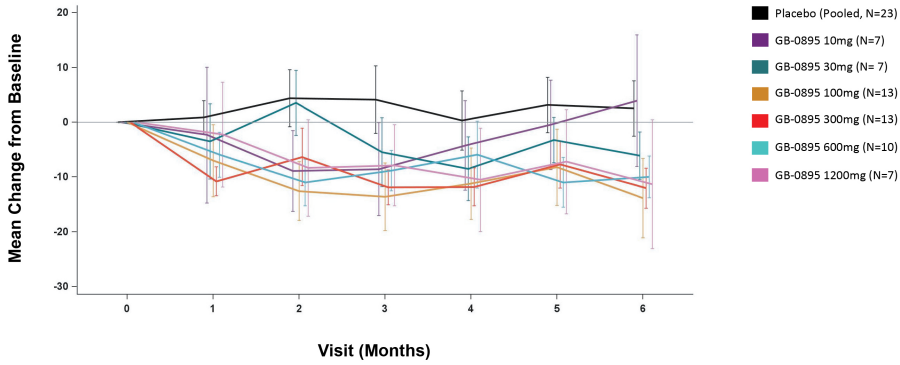
The Phase 1 clinical trial was designed to collect biomarker data over a wide dose range (10 mg to 1200 mg) to characterize the dose/exposure-response relationship for pharmacologically relevant biomarkers. As shown in the figure below, by Week 4, reductions from baseline in blood eosinophil counts were observed across all GB-0895 dose levels compared to placebo, with larger reductions at 300 mg and above, indicating a dose-response relationship.

Blood eosinophil fold ratio (of geometric means) from baseline over six months, with +/- 95% confidence interval

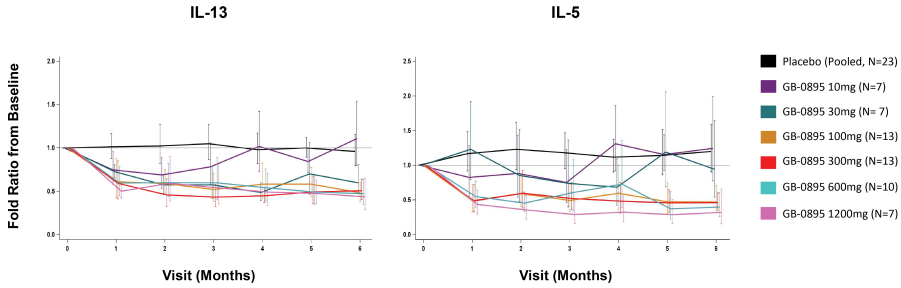


As shown in the figures below, we also observed reductions in additional PD biomarkers relevant to anti-TSLP mechanism of action, including FeNO, IL-5 and IL-13.

FeNO in parts per billion (ppb) mean change from baseline +/- standard error



IL-13 and IL-5 fold ratio (of geometric means) from baseline +/- 95% confidence intervals



Durable reductions in FeNO, IL-5 and IL-13 were seen at the 300 mg dose level, with sustained suppression maintained through Month 6. These biomarker reductions demonstrated that GB-0895 drove PD changes consistent with TSLP inhibition.

Impact of GB-0895 across PD biomarkers

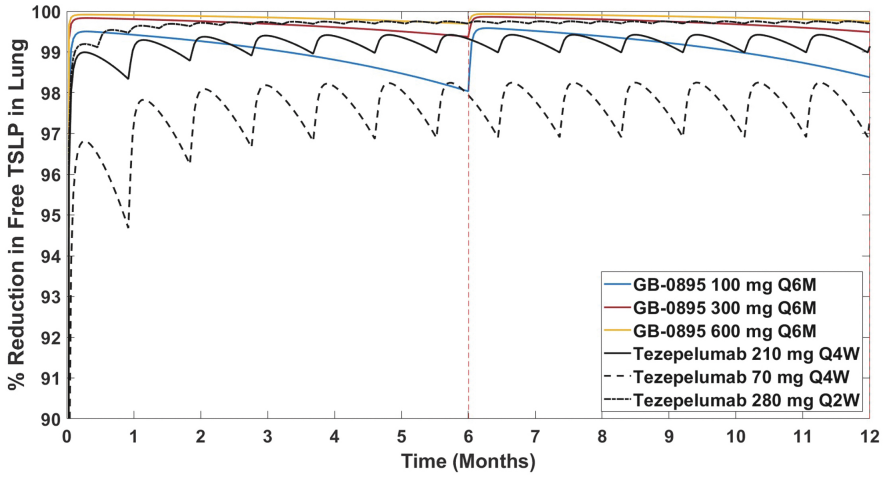
% Reduction in PD Biomarkers from Baseline Relative to Placebo				
	EOS	FeNO	IL-5	IL-13
GB-0895 6-Month (300 mg single dose)	51%	55%	74%	45%

Target Saturation

A site-of-action PK/PD model was developed to predict TSLP suppression in lung epithelial lining fluid as a function of dose and regimen. The model was simulated for both GB-0895 and tezepelumab

(considering differences in affinity and PK half-life) over a physiologically relevant range of TSLP concentration in lung epithelial lining fluid and lung partition coefficient. The simulated range of TSLP concentration covered asthma patients across disease severity (mild-moderate to severe asthma patients) as well as across EOS levels. In these models, tezepelumab simulations identified benchmark TSLP suppression associated with a clinically efficacious dose and regimen. Across all simulation scenarios, 300 mg of GB-0895 dosed Q26W resulted in TSLP suppression in lung tissue comparable to the approved 210 mg dose of tezepelumab dosed Q4W. We believe this results from the tighter binding affinity and longer half-life of GB-0895, although we have not conducted head-to-head clinical studies of GB-0895 against tezepelumab, and note that ongoing and future clinical trials for GB-0895 may produce differing clinical activity and tolerability results.

PK modeling of GB-0895 compared to tezepelumab



Safety and Tolerability

As of the November 7, 2025 data cutoff date, GB-0895 demonstrated generally favorable safety and tolerability results.

SAD Cohorts (N=80)

Adverse events in SAD cohorts

Subject Incidence of:	Cohort A1 (10mg) N=10	Cohort A2 (30mg) N=10	Cohort A3 (100mg) N=18	Cohort A4 (300mg) N=18	Cohort A5 (600mg) N=14	Cohort A6 (1200mg) N=10	Total N=80
Any TEAE	9 (90.0%)	8 (80.0%)	18 (100%)	17 (94.4%)	13 (92.9%)	9 (90.0%)	**74 (92.5%)**
Any Treatment-Related AE	1 (10.0%)	0 (0.0%)	1 (5.6%)	3 (16.7%)	4 (28.6%)	1 (10.0%)	**10 (12.5%)**
Any ISR*	1 (10.0%)	0 (0.0%)	1 (5.6%)	3 (16.7%)	4 (28.6%)	1 (10.0%)	**10 (12.5%)**

*ISRs include AEs reported under the MedDRS High Level Term 'Injection Site Reactions.'

In the SAD cohorts, a total of 80 subjects received a single subcutaneous dose of GB-0895 or a placebo and were followed for at least 26 weeks. Treatment-emergent adverse events ("TEAEs") were reported in 74 subjects (92.5%) across all treatment groups. The most common TEAEs (incidence ≥10% across all treatment groups) were nasopharyngitis, headache and rhinitis. No deaths occurred, and no

TEAEs led to trial discontinuation. There was no trend toward increased incidence or severity of TEAEs with increasing dose across the 10 mg to 1200 mg range.

Three serious adverse events ("SAEs") were reported during the trial: two in the 100 mg cohort and one in the 300 mg cohort. All three SAEs were Grade 3 in severity and were assessed by investigators to be not related to GB-0895. The SAEs included: (i) hospitalization for an acute asthma exacerbation triggered by influenza A infection; (ii) hospitalization for surgical repair of an ankle fracture following a motorcycle injury; and (iii) hospitalization for an anaphylactic reaction after an allergic reaction to a concomitant medication (metamizole). All other TEAEs were mild to moderate in severity (Grade 1-2). No TEAEs greater than Grade 3 occurred, and no treatment-related adverse events ("TRAEs") greater than Grade 2 were reported.

TRAEs in SAD cohorts

Subject Incidence of Treatment-Related AEs (TRAE):	Cohort A1 (10mg) N=10	Cohort A2 (30mg) N=10	Cohort A3 (100mg) N=18	Cohort A4 (300mg) N=18	Cohort A5 (600mg) N=14	Cohort A6 (1200mg) N=10	Total N=80
Any TRAE	1 (10.0%)	--	1 (5.6%)	3 (16.7%)	4 (28.6%)	1 (10.0%)	**10 (12.5%)**
Any Grade 1-2 TRAE	1 (10.0%)	--	1 (5.6%)	3 (16.7%)	4 (28.6%)	1 (10.0%)	**10 (12.5%)**
Any Grade 3 TRAE	--	--	--	--	--	--	--
Any Treatment-Related SAE	--	--	--	--	--	--	--
TRAEs by Preferred Term (PT)	Injection Site Erythema		Injection Site Erythema	Injection Site Pain, Injection Site Erythema	Injection Site Erythema, Injection Site Induration, Injection Site Bruising, Hot Flush	Injection Site Erythema	

TRAEs were reported in 10 subjects (12.5%), all of which were Grade 1 injection site reactions ("ISRs"), including injection-site erythema, pain, induration and bruising.

MAD Cohorts (N=16)

In the MAD cohorts, a total of 16 subjects across two cohorts received 300 mg (Cohort B1, N=8) or 600 mg (Cohort B2, N=8) administered subcutaneously every 12 weeks for a total of two doses. TEAEs were reported in all 16 subjects (100%) and were all mild to moderate in severity (Grade 1-2). No TEAEs greater than Grade 2 and no SAEs were reported in the MAD cohorts. There was no evidence of a relationship between dose and the incidence or severity of adverse events. No deaths occurred and no TEAEs led to discontinuation.

TRAEs in MAD cohorts

Subject Incidence of Treatment-Related AEs (TRAE):	Cohort B1 (300mg) N=8	Cohort B2 (600mg) N=8	Total N=16
Any TRAE	1 (12.5%)	3 (37.5%)	**4 (25%)**
Any Grade 1-2 TRAE	1 (12.5%)	3 (37.5%)	**4 (25%)**
Any Grade 3 TRAE	--	--	--
Any Treatment-Related SAE	--	--	--
TRAEs by Preferred Term (PT)	Headache, Hyperhidrosis, Injection Site Reaction, Nausea, Vomiting[1]	Injection Site Bruising, Injection Site Erythema, Injection Site Pain	

TRAES were reported in four subjects (25%), all Grade 1-2. The most common TRAEs were ISRs, including injection-site erythema, pain and bruising. Other treatment-related events included headache, hyperhidrosis, nausea and vomiting, which all occurred in the same subject.

Immunogenicity

Low rates of ADAs were observed in the Phase 1 clinical trial. ADA data were available for 69 subjects. Treatment-emergent ADAs were detected in seven subjects, and all but one of these responses were transient, becoming ADA-negative within approximately one month. The development of ADAs had no observable impact on GB-0895 PK, as half-life was similar in ADA-positive and ADA-negative subjects.

Asthma Next Steps

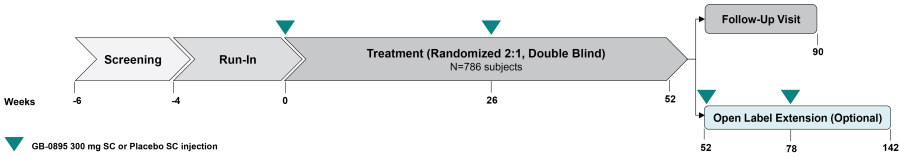
GB-0895 is being advanced in severe asthma through parallel global Phase 3 trials that we intend to use as the primary basis for global registrations of the product. We are enrolling patients in two randomized, double-blind, placebo-controlled Phase 3 trials, SOLAIRIA-1 and SOLAIRIA-2, each evaluating a single 300 mg subcutaneous dose of GB-0895 administered once every 26 weeks as adjunctive therapy in adults and adolescents with severe uncontrolled asthma. Both trials are currently in the enrollment phase. The Q26W dosing regimen in these trials were informed in part by results from our Phase 1 asthma trial, in which GB-0895 demonstrated a mean terminal half-life of approximately 98 days and deep suppression of key Type 2 inflammatory biomarkers at the 300 mg dose, supporting evaluation of whether sustained target engagement and disease control can be maintained over a six-month dosing interval.

Phase 3 Severe Asthma Program (SOLAIRIA-1 and SOLAIRIA-2)

The SOLAIRIA-1 and SOLAIRIA-2 trials share a common design intended to provide two independent, confirmatory data sets. In each trial, we plan to enroll approximately 786 adults and adolescents aged 12 to 80 years with a physician diagnosis of asthma for at least two years, who remain symptomatic and at high risk for exacerbations despite treatment with medium- to high-dose inhaled corticosteroids plus at least one additional controller therapy, with or without stable low-dose oral corticosteroids. Eligible subjects must have a well-documented history of at least two exacerbations requiring systemic corticosteroid treatment in the prior year. Subjects are not required to have a minimum eosinophilic count to participate in the trial.

As shown in the figure below, participants are randomized 2:1 to receive GB-0895 300 mg or placebo, administered as a single subcutaneous injection at Week 0 and Week 26, on top of their background standard of care. The double-blind treatment period extends over 52 weeks, followed by either a safety follow-up period or an optional open-label extension, during which all participants may receive GB-0895 300 mg every six months. The trial is being conducted globally, with sites planned across North America, Europe, Latin America and Asia, and is designed to enroll a balanced population across higher and lower blood eosinophil strata.

Overview of Phase 3 SOLAIRIA-1 and SOLAIRIA-2 clinical trial design



For both SOLAIRIA trials, the primary objective is to evaluate the efficacy of a 300 mg dose of GB-0895 administered every 26 weeks in reducing clinically significant asthma exacerbations over 52 weeks in adults and adolescents with severe uncontrolled asthma. The primary endpoint is the annualized asthma exacerbation rate over 52 weeks, defined as exacerbations requiring systemic corticosteroids and/or hospitalization or emergency department visits requiring systemic corticosteroids. A key secondary objective is to assess the same endpoint in subjects with baseline blood eosinophil counts below 300 cells/μL, reflecting our intent to understand GB-0895's potential across both more eosinophilic and less eosinophilic phenotypes. Additional key secondary endpoints include measures of lung function (such as change from baseline in pre-bronchodilator FEV_1 at Week 52), patient-reported asthma control and

quality of life, time to first exacerbation and other exacerbation-related outcomes. Exploratory endpoints include health-related quality-of-life instruments, rescue medication use, home peak flow and multiple PK and PD readouts—including blood biomarkers, FeNO and peripheral eosinophil counts—which are expected to further characterize the relationship between long-acting TSLP blockade, biomarker modulation and clinical outcomes.

Regulatory Strategy

We have developed our Phase 3 program and dose/regimen selection in severe asthma in the context of prior interactions with the FDA, including a Model-Informed Drug Development ("MIDD") meeting and at the End-of-Phase 1, as well as interactions with European and U.K. regulatory authorities through scientific advice and other formal engagements. These engagements focused on the use of Phase 1 PK and biomarker data, along with quantitative modeling, to support selection of the 300 mg Q26W dosing regimen and an exacerbation-based primary endpoint in a broad severe asthma population. Our current regulatory strategy is to pursue severe asthma as the lead indication for GB-0895, seeking initial approval based primarily on the SOLAIRIA-1 and SOLAIRIA-2 trials together with our earlier clinical and preclinical data. We also plan to evaluate multiple approaches to determine the optimal development path for GB-0895 for the treatment of COPD, taking into account expected clinical timelines, regulatory feedback, costs and the clinical data from our Phase 1b trial. As part of such evaluation, we plan to seek engagement with regulatory authorities in 2026 to discuss our development strategy and obtain regulatory feedback on our proposed approach. We will also consider whether to pursue other indications in the future.

CMC Strategy

In parallel with the clinical development program, we are executing an integrated chemistry, manufacturing and controls ("CMC") strategy intended to provide sufficient drug substance and drug product to support global Phase 3 development of GB-0895 and, if approved, commercial supply. We do not own or operate, and currently have no plans to establish, any manufacturing facilities. All of our preclinical and clinical drug supply development, manufacturing, storage, distribution and testing are outsourced to third-party manufacturers and facilities. Drug substance is produced by our CDMO using an established monoclonal antibody platform process that has been scaled to 1,000-liter single-use bioreactors for Phase 1 and Phase 3 supply, with a planned scale-up to 2,000 liters at a commercial-ready facility to support anticipated launch volumes. We are developing a high-concentration liquid formulation designed to deliver the full 300 mg dose in a single subcutaneous injection, and early stability data support storage at standard refrigerated temperatures for extended periods, with ongoing trials to define the product's final shelf life. Consistent with other biologics programs, we plan to complete process performance qualification for both drug substance and drug product, along with validation of analytical methods, in advance of any Biologics License Application ("BLA") submission in the U.S. or any marketing application elsewhere.

Commercial Presentation and Device Strategy

Our commercial presentation strategy for GB-0895 in severe asthma is centered on subcutaneous self- or clinician-administered formats. We currently plan to use a pre-filled safety syringe ("PFS") presentation as the primary configuration for late-stage clinical development and initial commercialization, subject to completion of the necessary formulation, stability, human factors and device-related regulatory work. Our early clinical trials have used a syringe and vial presentation, and we intend to transition to the PFS presentation via protocol and regulatory amendments so that the pivotal Phase 3 trials and subsequent commercial supply align to a single, high-concentration formulation and PFS presentation.

In parallel, we are advancing an autoinjector presentation using the same or a closely-related formulation. This program is anticipated to include additional human factors studies and device performance testing and, where required, a PK bridging trial in healthy volunteers to demonstrate comparability to the PFS. Based on our current planning, we view the PFS as the base case for initial regulatory filings and, if approved, commercial launch, with the autoinjector as a potential follow-on presentation that could be introduced shortly after initial launch, subject to successful completion of the additional device work and supplemental regulatory review.

GB-0895 for the Treatment of COPD

COPD Disease Overview

COPD is a heterogeneous lung condition characterized by chronic respiratory symptoms (dyspnea, cough, sputum production and exacerbations) due to airway abnormalities (bronchitis, bronchiolitis) and/or alveolar damage (emphysema), resulting in persistent, often progressive, airflow obstruction. It is typically caused by long-term exposure to inhaled irritants, most commonly cigarette smoke, and people with a history of asthma are also at increased risk. COPD encompasses both Type 2 and Non-Type 2 inflammatory phenotypes. Patients are prone to acute worsening of symptoms that often require targeted preventive and treatment strategies. Exacerbations are frequently triggered by respiratory infections and environmental exposures such as air pollution and temperature extremes that contribute to further disease progression and mortality.

Treatment of COPD has historically relied on inhaled corticosteroids and bronchodilator inhalers (long-acting β2-agonists and long-acting muscarinic antagonists), with oxygen therapy and surgery reserved for advanced disease. As of 2025, only two biologics—dupilumab (DUPIXENT) and mepolizumab (NUCALA)—have been approved for the treatment of COPD, each only gaining approval for this indication in the last two years after studying applications for use in approximately 10% and 28% of the total COPD population in Phase 3 trials, respectively. These medicines have been studied in patients with blood eosinophil counts ≥300 cells/μL, leaving patients with lower eosinophil counts without any approved biologic treatment options.

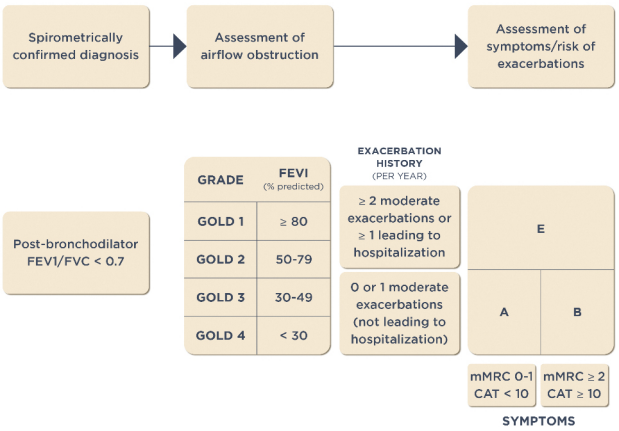
In the Phase 2a COURSE trial in COPD, tezepelumab demonstrated potential benefit, with numerically greater, though not statistically significant, reductions in annualized exacerbation rates compared with both dupilumab and mepolizumab in patients with higher (≥300 cells/μL) and lower (≥150 cells/μL) blood eosinophil counts. Larger, confirmatory Phase 3 trials are required to determine whether these findings translate into clinically and statistically meaningful benefit; however, the COURSE data suggest that TSLP blockade may have therapeutic potential in COPD, including in the EOS ≥150 cells/μL patient segment who currently have no biologic options.

COPD Market Opportunity

COPD represents an opportunity for GB-0895 that is distinct and complimentary of GB-0895 in patients with severe asthma. Recent global analyses estimate that COPD affects more than 400 million people worldwide and remains among the leading causes of death globally, accounting for more than three million deaths annually. In the United States, COPD affects approximately 11.7 million adults and accounts for hundreds of thousands of emergency department visits and tens of billions of dollars in healthcare costs annually. COPD is also historically underdiagnosed; as of 2015, roughly four out of five (approximately 80%) of spirometry-defined COPD cases had never received a COPD diagnosis.

Biologics have only recently begun to enter COPD treatment algorithms. In September 2024, dupilumab was approved in the United States as the first biologic therapy for COPD as an add-on maintenance treatment for adults with inadequately controlled COPD and an eosinophilic phenotype. mepolizumab was approved more recently in May 2025. To date, the patient populations targeted by these biologics align with the Global Initiative for Chronic Obstructive Lung Disease (“GOLD”) Group E (formerly Groups C and D), which comprises individuals at higher risk of exacerbations (as illustrated in the figure below). At present, biologic penetration in COPD is at a very early stage, with less than 1% of the approximately 3.0 million biologic-eligible patients treated receiving biologic treatment in 2024, reflecting the recency of approvals and the time required for incorporation into guidelines and medical practice. While there were less than $1.0 billion in global biologic sales for COPD in 2024, global biologic sales are expected to reach more than $23 billion in 2034, highlighting the potentially large and untapped market opportunity for COPD.

Global initiative for GOLD assessment criteria



COPD Unmet Need and Our Value Proposition

Approximately 70% of COPD patients have blood eosinophil counts <300 cells/µL, while only about 30% have eosinophil counts ≥300 cells/µL. As a result, the two approved COPD biologics, which have been studied and approved primarily in higher-eosinophil populations, do not address the majority of patients with lower eosinophil counts, who currently lack any approved biologic options. We therefore view COPD as an area of significant remaining unmet need and as a potential opportunity for additional biologic mechanisms, including TSLP inhibition, subject to the success of ongoing and future clinical development.

COPD Clinical Development

The Phase 1b COPD expansion trial (GB-0895-101 Part C) is an extension of our Phase 1 clinical trial and is a randomized, double-blind, placebo-controlled, multiple-dose trial and is designed to evaluate the safety, tolerability, PK/PD and immunogenicity of GB-0895. This expansion builds on the safety and PK data generated in the Phase 1 asthma trial (Parts A and B) to characterize GB-0895 in patients with COPD. The trial enrolled adult patients (≥40 years of age) with moderate-to-severe COPD and with a blood eosinophil count of at least 200 cells/µL rather than 150 cells/µL to provide a larger window for dose-PD characterization.

The trial includes two dose cohorts of GB-0895, 300 mg and 600 mg, administered subcutaneously. The trial enrolled 40 patients across these two cohorts, with 20 patients per cohort randomized 3:1 to GB-0895 or placebo. GB-0895 or placebo is administered at prespecified intervals to characterize the PK profile and PD effects over an extended observation period. The primary objective of the trial is to evaluate the safety and tolerability of GB-0895 in patients with moderate-to-severe COPD. Safety assessments include monitoring of TEAEs, SAEs, ISRs, clinical laboratory parameters, vital signs and electrocardiograms. Secondary objectives include characterization of the PK profile of GB-0895 in COPD patients, assessment of PD biomarkers relevant to TSLP inhibition (including EOS, FeNO and inflammatory cytokines such as IL-5 and IL-13) and evaluation of immunogenicity through assessment of ADAs. Exploratory endpoints include evaluation of clinical activity surrogates, such as FEV_1, patient-reported outcomes including the St. George's Respiratory Questionnaire (the "SGRQ") and COPD Assessment Test (“CAT”) scores, and COPD exacerbation frequency. The trial is designed to provide initial data on the PD effects of GB-0895 in patients with COPD and to inform dose selection for potential future Phase 2 or Phase 3 development in this indication.

As of November 7, 2025, preliminary data for GB-0895 from the Phase 1b COPD expansion trial showed reductions in key biomarkers and a PK profile generally consistent with the Phase 1 mild-to-moderate asthma trial:

- Preliminary EOS reduction data showed overlapping reductions between 300 mg and 600 mg. Both doses demonstrated ~50% reductions in EOS and indicated strong signal of PD activity.
- Preliminary FeNO reduction data showed overlapping reductions between 300 mg and 600 mg. Both doses demonstrated ~20-25% reductions in FeNO, although reductions overlapped with the placebo cohort.
- At week 8, both IL-13 and IL-5 show ~50% reductions, although reductions overlapped with the placebo cohort for IL-13.

As of the November 7, 2025 data cutoff, the safety results observed have been favorable and, together with other data, suggests support for further clinical development of GB-0895 for the treatment of COPD. However, we do not have yet have a complete Phase 1b data package. The Phase 1b trial remains ongoing and blinded; as of November 10, 2025, 40 subjects with COPD have received a single dose of GB-0895 or placebo (20 subjects in the 300 mg cohort and 20 subjects in the 600 mg cohort). The emerging safety data indicate that GB-0895 has been generally well tolerated, with most TEAEs reported as mild to moderate in severity (Grade 1-2). One SAE (Grade 3, back pain) has been reported and was assessed by the investigator as not related to GB-0895/placebo.

COPD Next Steps

We are currently evaluating multiple approaches for the future development path for GB-0895 in patients with COPD, taking into account, among other things, likely speed to market, expected development costs and the robustness of the evidence base. We plan to seek engagement with the FDA to discuss our development strategy and obtain regulatory feedback on a proposed approach.

Our future development strategy is expected to be informed by the complete Phase 1b data package, any feedback from regulatory authorities and our assessment of the balance between development speed, cost and regulatory expectations.

Preclinical Data

Preclinical studies of GB-0895 were designed to characterize its pharmacology, PK and toxicology in support of first-in-human dosing, subsequent clinical development and the planned Q26W dosing regimen. In such studies, GB-0895 showed high affinity and selective binding to TSLP, potent functional pathway blockade in human-relevant systems, activity in TSLP-driven asthma models, extended systemic exposure in cynomolgus (“cyno”) monkeys consistent with its Fc engineering, and favorable preclinical safety data, supporting progression into patients.

In Vitro Pharmacology and Selectivity

In *in vitro* pharmacology studies, GB-0895 bound human TSLP ("hTSLP") and cynomolgus TSLP ("cyno TSLP") with very high affinity and neutralized TSLP-driven signaling. Binding studies showed that GB-0895 recognized human and cynomolgus TSLP but did not bind rodent TSLP, supporting the use of cynomolgus monkeys as the pharmacologically relevant species for toxicology. An analog antibody without the YTE half-life extension mutations (internally known as PRO-17101), which is otherwise sequence-identical to GB-0895, bound human TSLP with sub-picomolar affinity and cynomolgus TSLP with similarly high affinity and exhibited comparable potency to tezepelumab in these assays, as shown in the figure below.

PRO-17101 and tezepelumab binding affinities to hTSLP and cyno TSLP as determined by KinExA

	tezepelumab	**PRO-17101 (GB-0895 with no Fc YTE mutations)**
KinExA K_D (pM)	2.24	0.106
KenExa K_D (pM) Cyno TSLP	9.05	1.25
Cyno K_D Fold/Human K_D	4.04	11.79

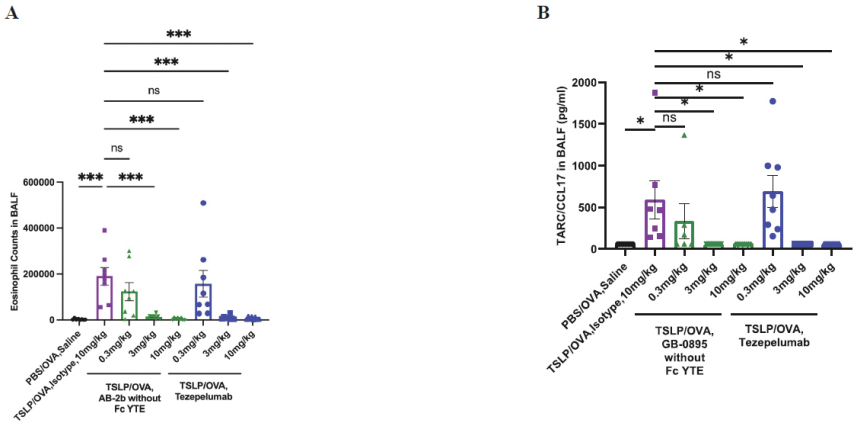
Functional studies in human primary myeloid dendritic cells, peripheral blood mononuclear cells, whole blood and cynomolgus peripheral blood mononuclear cells showed that GB-0895 robustly inhibited TSLP-induced downstream readouts, including STAT5 phosphorylation and production of chemokines, such as macrophage-derived chemokine (MDC/CCL22) and thymus and activation-regulated chemokine (TARC/CCL17), with inhibitory concentrations in the low tens of nanograms per milliliter range. GB-0895 also competed with a benchmark anti-TSLP antibody with the same sequence as tezepelumab for binding to human TSLP in a proximity-based binding assay, consistent with recognition of an overlapping epitope and a shared mechanism of pathway blockade.

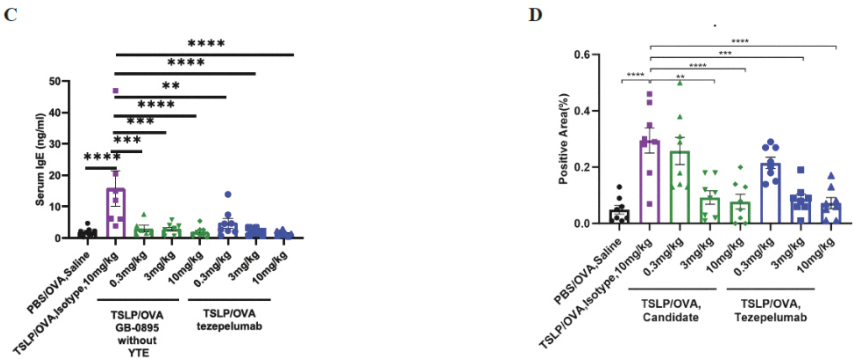
Selectivity assessments of GB-0895, including a cell-based microarray of more than 6,000 human proteins and a tissue cross-reactivity study on normal human tissues, showed binding only to TSLP, and we observed no unexpected tissue cross-reactivity, supporting a low likelihood of off-target pharmacology.

In Vivo Pharmacology

The *in vivo* pharmacology of GB-0895 was evaluated using PRO-17101 in TSLP/TSLP receptor ("TSLPR") humanized mouse models of allergic asthma, in which mouse TSLP and its receptor were replaced with their human counterparts to preserve TSLP pharmacology. As depicted in the Figure below, co-administration of TSLP and ovalbumin ("OVA") induced features characteristic of Type 2 inflammation, including: increased serum IgE, IL-4, IL-13, as well as chemokines such as TARC/CCL17 in bronchoalveolar lavage fluid ("BALF"), eosinophilic inflammation in the lung and mucus hypersecretion. Treatment with PRO-17101 decreased total leukocyte and eosinophil counts in BALF (figure A below), significantly reduced BALF IgE, IL-4, IL-13 and TARC/CCL17 levels (figure B below) and serum IgE (figure C below), and attenuated inflammatory cell infiltration and mucus production in lung tissue (figure D below). In these models, a benchmark anti-TSLP antibody with the same sequence as tezepelumab produced similar effects. We believe these data support that high-affinity TSLP neutralization by GB-0895 can suppress cytokines at the top of Type 2 airway inflammation cascade and improve multiple biomarkers and histologic features relevant to severe asthma. While the ultra-high binding affinity of GB-0895, coupled with data supporting long half-life, supports sustained activity over a prolonged timeframe, this phenomenon was not predicted to be shown in this *in vivo* wild-type mouse study because the therapeutic antibodies were administered only twice over a short timeframe to maximize acute target engagement and biological activity *in vivo*. Further the experiment used a version of GB-0895 without a YTE half-life extension, since the impact of YTE on antibody exposure in wild-type mice can be variable and often limited.

GB-0895 without Fc YTE mutations reduced hallmarks of asthma in a preclinical hTSLP/hTSLPR asthma mouse model





hTSLPR=human TSLPR; ns=not significant; PBS=phosphate buffered saline.

Toxicology and Safety Pharmacology

The toxicology and safety pharmacology program for GB-0895 relied on cynomolgus monkeys as the single relevant species, supplemented by local tolerance studies in rabbits. In a single-dose trial in cynomolgus monkeys, GB-0895 was generally well tolerated after both intravenous and subcutaneous administration in doses up to 25 mg/kg, with no adverse clinical, clinical pathology or gross pathological findings.

Opportunities for Development in Additional Indications

TSLP is an epithelial-derived cytokine produced at multiple barrier sites, including the lung, skin and gastrointestinal tract, where it acts on dendritic cells, T-cells, B cells, mast cells, eosinophils and innate lymphoid cells to promote Type 2 inflammatory responses. Tezepelumab is approved for severe asthma and, more recently, was approved for chronic rhinosinusitis with nasal polyps (“CRSwNP”), underscoring the broader relevance of TSLP biology beyond lower airway disease. Recent mechanistic and translational work, as well as third-party clinical development of other TSLP-targeting agents, supports the potential relevance of TSLP blockade in additional Type 2 and epithelial barrier-driven conditions, including CRSwNP, eosinophilic esophagitis (“EoE”), chronic spontaneous urticaria (“CSU”), atopic dermatitis (“AD”) and severe food allergies.

Based on independent literature and the ongoing clinical evaluation of other anti-TSLP monoclonal antibodies, we view CRSwNP, EoE, CSU, AD and severe food allergy as potential longer-term indication expansion opportunities for GB-0895. We expect to consider a variety of relevant criteria in making any decisions to pursue these indications, including outcomes and results from our ongoing clinical trials of GB-0895, the results of external anti-TSLP trials in these diseases, regulatory feedback and our overall portfolio and capital allocation priorities.

We may also seek to evaluate GB-0895 in combination with other therapies in Type 2 and epithelial barrier-driven diseases such as antibodies targeting IL-13 and OX40 ligand. Subject to emerging data, we believe that rational combination approaches that incorporate GB-0895 could have the potential to address residual disease activity in selected patient populations.

GB-4362: An MMAE Payload Neutralizer Monoclonal Antibody

Overview

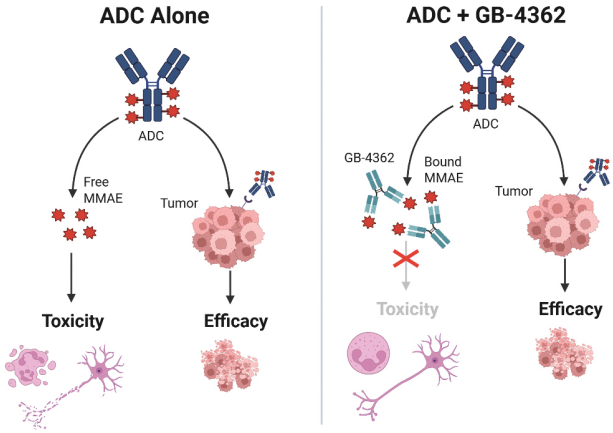
We utilized our Generate Platform to develop GB-4362, a systemically administered monoclonal antibody candidate designed to neutralize free MMAE, which we are initially developing as an adjunctive therapy to ADCs armed with an MMAE payload. For MMAE-based ADCs, off-target exposure to free MMAE is now recognized as the primary driver of dose-limiting toxicities such as neutropenia and peripheral neuropathy. GB-4362 is designed to selectively bind and clear circulating MMAE released from

ADCs while preserving intratumoral payload delivery and anti-tumor activity of the ADC. We submitted an IND for GB-4362 in early December 2025, and we expect to initiate a Phase 1 dose-escalation trial in combination with enfortumab vedotin ("EV") plus pembrolizumab in , subject to receiving authorization from the FDA to proceed, with the trial under the IND. This clinical trial is designed to primarily assess GB-4362's safety and tolerability, characterize the PK/PD effects of GB-4362, including reductions in free MMAE, and identify a recommended Phase 2 dose. In the expansion portion of this clinical trial, we intend to evaluate GB-4362's safety, PK/PD and impact on free MMAE reduction. We are considering using this expansion portion of the clinical trial as an early proof of concept, and if we determine to proceed, we plan to evaluate the impact of GB-4362 on progression from Grade 1 to Grade 2 peripheral neuropathy in patients who develop their first sustained Grade 1 peripheral neuropathy while receiving EV plus pembrolizumab for the treatment of first-line metastatic urothelial carcinoma ("1L muC"). In preclinical mouse and non-human primate ("NHP") studies, GB-4362 demonstrated dose-dependent reductions in systemic MMAE exposure. Preclinical data suggest that a 50% or greater reduction in free MMAE may improve tolerability, reduce dose-limiting toxicities, and maintain ADC dose intensity. As development progresses, we may explore the potential of GB-4362 in additional combinations with approved or in development MMAE-ADC regimens. This is intended to allow us to broaden our focus to additional tumor types where MMAE-related toxicities limit therapeutic benefit.

Potential Mechanism of Action and Rationale

ADCs are designed to deliver highly potent cytotoxic payloads directly into tumors, and yet only a small fraction of the cytotoxic payload typically reaches cancer cells due to premature linker cleavage. Free MMAE is the term for this prematurely released cytotoxic payload from MMAE-based ADCs that ends up in circulation causing systemic toxicity. As illustrated in the figure below, payload-mediated toxicities could arise from premature linker cleavage and passive diffusion of free payload into healthy tissues. For MMAE-based ADCs, this off-target exposure to free MMAE is now recognized as the primary driver of dose-limiting toxicities such as neutropenia and peripheral neuropathy. These off-target payload-mediated toxicities consistently manifest across ADCs that share the same payload, independent of their antigen target.

Mechanism for ADC toxicity and GB-4362 mechanism



Technology Approach and Molecular Characteristics

We designed GB-4362 to reduce systemic exposure to free MMAE by selectively binding and neutralizing only the unconjugated, systemically circulating MMAE while preserving the tumor-directed clinical activity of ADC-conjugated MMAE. GB-4362 is a recombinant, humanized Immunoglobulin G ("IgG") 1 monoclonal antibody candidate engineered to selectively bind and neutralize free MMAE. The antibody was engineered using our Generate Platform, leveraging structural information on MMAE and

publicly available data on MMAE-binding antibodies. Computationally engineered variants were screened *in vitro* for (i) high-affinity binding to free MMAE, (ii) no binding to MMAE while conjugated to ADCs, and (iii) maximal neutralization of circulating MMAE.

High potential candidates were further evaluated across an extensive developability panel to select and identify what we believe to be an optimized clinical candidate suitable for large-scale manufacturing. GB-4362 also incorporates Fc-engineering and is thereby designed to minimize Fc-mediated effector functions while maintaining favorable PK.

Market Opportunity

Bladder cancer is the most common urinary tract malignancy, with more than 573,000 new cases globally in 2020 and incidence projected to nearly double by 2040. In the United States, bladder cancer is the sixth most common cancer overall with approximately 83,000 incident cases in 2024 and the fourth most common in men, disproportionately affecting older adults. Urothelial carcinoma represents over 90% of all bladder cancers and is characterized by high recurrence rates and substantial morbidity. More than 50% of such patients recur or progress to locally advanced or metastatic urothelial carcinoma (“mUC”), where prognosis remains poor despite therapeutic advances, with historical median overall survival of 12-16 months and five-year survival below 10%.

The introduction of immune checkpoint inhibitors and, more recently, ADCs has transformed the treatment landscape. The combination of EV plus pembrolizumab demonstrated a doubling of progression-free and overall survival versus platinum chemotherapy in previously untreated mUC, and has become the preferred first-line standard of care per National Comprehensive Cancer Network guidelines.

Despite these advances, MMAE-related toxicities remain a fundamental limitation of ADC therapies, including EV, with peripheral neuropathy emerging as the most frequent and clinically consequential adverse event. In the EV-103 Phase 3 trial conducted by Aestellas Pharma Inc. ("Astellas") and Seagen Inc., which evaluated EV plus pembrolizumab for the treatment of 1L mUC, peripheral neuropathy of any grade occurred in 65% of patients and was one of the leading causes of treatment interruption (18%), dose reduction (17%) and discontinuation (20%). Onset is cumulative and delayed, typically occurring after 5-6 cycles of therapy, and resolution is uncommon. Peripheral neuropathy is a recognized toxicity with EV and requires clinicians to monitor and manage with dose modifications. In practice, significant neuropathy can influence subsequent therapy decisions (including platinum-based chemotherapy) and eligibility for some clinical trials.

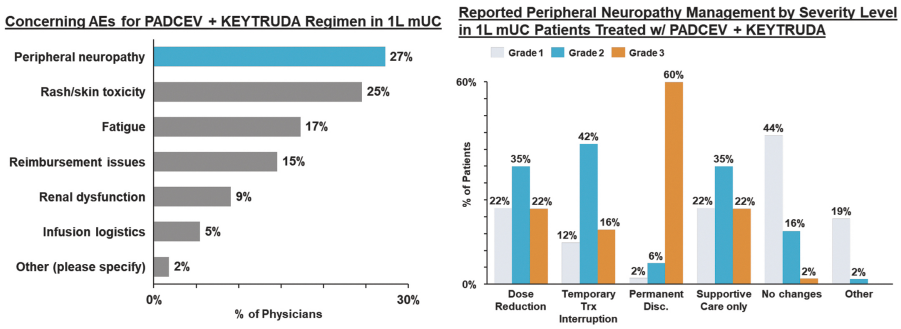
Unmet Need and Our Value Proposition

There are currently no FDA-approved agents for preventing or mitigating toxicities caused by free MMAE, and current management of toxicities relies solely on dose reduction, interruption or discontinuation, which can compromise the delivery and effectiveness of life-prolonging therapy. Given the growing adoption of MMAE-based ADCs—more than 10,000 U.S. patients with advanced or mUC alone receive EV-containing regimens each year—there is a substantial unmet need for interventions that can reduce systemic MMAE exposure without diminishing anti-tumor activity.

We designed GB-4362 for its potential to directly address this need. As a systemically administered antibody candidate that selectively binds and neutralizes free circulating MMAE while preserving ADC-mediated intracellular payload delivery, GB-4362 has the potential to reduce treatment-limiting toxicities, maintain ADC dose intensity, and improve clinical outcomes for patients receiving EV plus pembrolizumab and other MMAE-based ADCs.

Our internal market research conducted with 45 oncologists in 2025 showed strong physician willingness to adopt an MMAE neutralizer alongside EV plus pembrolizumab if it could meaningfully reduce MMAE-related toxicities. EV plus pembrolizumab is already widely used in 1L muC, with most oncologists reporting treatment durations of approximately six months or longer. Physicians consistently identified peripheral neuropathy as the most concerning toxicity of the regimen and emphasized that it often emerges within four to six treatment cycles and it is a major driver of dose reductions, interruptions and discontinuations, despite the regimen’s robust clinical activity profile, as illustrated in the figure below.

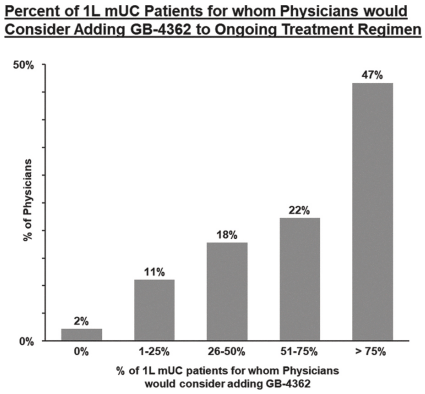
Generate market research outlining AE concerns for EV plus pembrolizumab regimen and management of peripheral neuropathy in 1L mUC (N=45)



EV is marketed as PADCEV by Astellas and Pfizer Inc. ("Pfizer") and pembrolizumab is marketed as KEYTRUDA by Merck.

Surveyed oncologists indicated that a meaningful reduction (approximately 50%) in peripheral neuropathy would lead them to incorporate an MMAE neutralizer in a large majority of 1L mUC patients, as illustrated in the figure below.

Generate market research outlining physicians' appetite for addition of GB-4362 to EV plus pembrolizumab in 1L mUC patients



Physicians also expressed interest in using a neutralizer in MIBC and across other MMAE-based ADC regimens, reflecting broad recognition that MMAE-driven toxicities remain a class-wide challenge. Overall, we believe these market research findings point to significant clinical pull-through potential and broad adoption if GB-4362 demonstrates meaningful reduction in treatment-limiting MMAE toxicities.

Opportunities for Indication Expansion

We believe there are several expansion opportunities for GB-4362 beyond the initial indication. In addition to mUC, EV-based regimens have been explored in other indications across the bladder-cancer care continuum, including muscle-invasive bladder cancer ("MIBC"). This highlights the urgent need to mitigate toxicity for a growing population of bladder cancer patients. Moreover, toxicity caused by premature release of free MMAE payload is a challenge that extends beyond EV. All five FDA-approved

MMAE-containing ADCs share the same MMAE payload and demonstrate similar patterns of dose-limiting peripheral neuropathy and hematologic toxicity. Numerous next-generation MMAE ADCs, including disitamab vedotin and sigvotatug vedotin, are in development, potentially further expanding the population exposed to MMAE-associated toxicities.

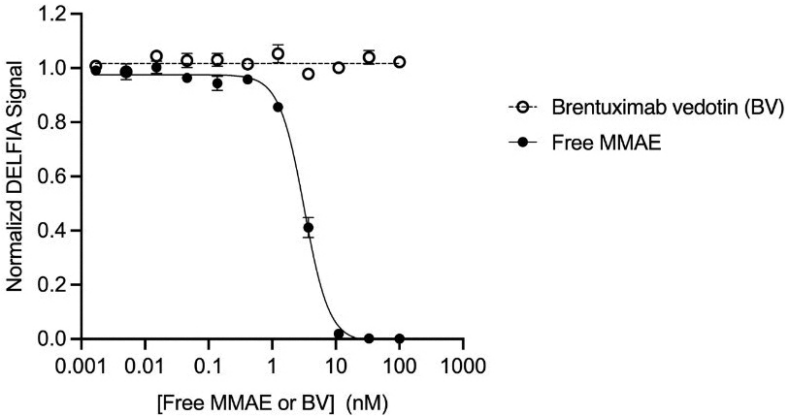
Preclinical Data

In preclinical studies *in vitro* and *in vivo*, GB-4362 was selective for free MMAE and, when dosed in combination with an MMAE-based ADC, showed a clear dose-dependent reduction in free MMAE and preserved the MMAE-based ADC clinical activity. GB-4362 also showed an impact on free MMAE related toxicities and reduced neutropenia and skin toxicity in a dose-dependent fashion. GB-4362 was also generally well tolerated in GLP toxicity studies, supporting progression into the clinical stage of development.

In Vitro Pharmacology and Selectivity

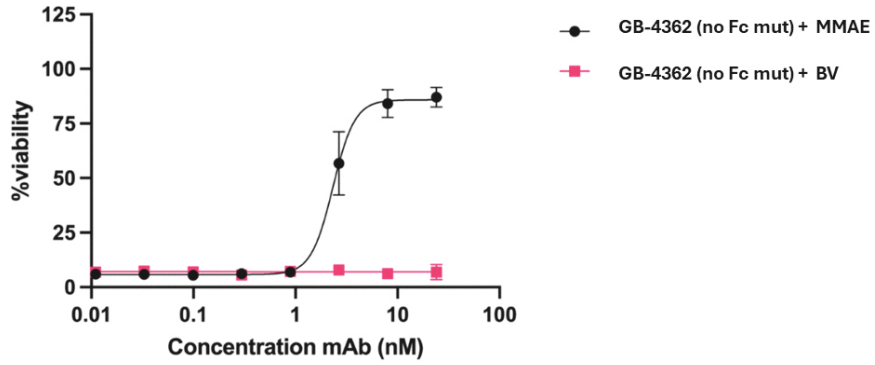
In *in vitro* pharmacology studies, GB-4362 bound free MMAE with picomolar affinity and showed no measurable binding to MMAE when it was conjugated to an ADC linker. In competition assays using free MMAE and brentuximab vedotin ("BV"), which is an FDA-approved MMAE-based ADC, we further observed this specificity by measuring normalized fluorescent signal (DELFIA). In such assays, we observed that GB-4362 binding was displaced by free MMAE but not BV, leading to signal decrease in a dose-dependent fashion, and thereby demonstrated that GB-4362 exclusively recognized unconjugated MMAE, as illustrated in the figure below.

GB-4362 binding was specific to free MMAE



This mechanistic selectivity translated into functional selectivity in cell-based assays. In a version of GB-4362, where Fc mutations were removed, we observed that this GB-4362 version candidate neutralized the cytotoxicity of free MMAE in a concentration-dependent manner, and preserved the full cytotoxic activity of BV in Karpas 299 cells was preserved, as illustrated in the figure below.

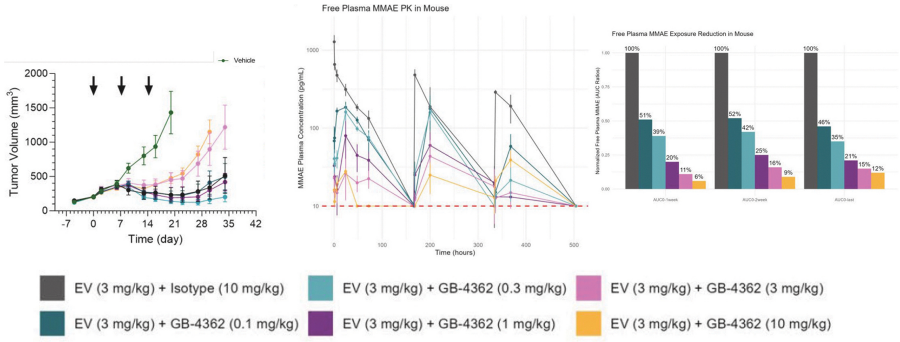
GB-4362 lacking Fc mutations blocked MMAE and not ADC cytotoxicity



In Vivo Pharmacology

In a bladder cancer patient-derived xenograft (PDX) mouse model, co-administration of GB-4362 with EV demonstrated that GB-4362 substantially lowered free MMAE in a dose dependent manner and without compromising anti-tumor activity. When 3 mg/kg EV was combined with 0.1-1 mg/kg GB-4362, free plasma MMAE exposure was reduced by up to 80% ($AUC_{0\text{-}1}$week) at 1 mg/kg, while tumor growth inhibition remained comparable to EV plus isotype control. In contrast, higher GB-4362 doses (3-10 mg/kg) produced ≥89-94% reductions in free MMAE exposure and were associated with a statistically significant loss of EV efficacy consistent with attenuation of the bystander effect, which contributes to tumor cell killing in heterogeneous solid tumors. These data support a therapeutic window in which an approximately 50-80% reduction in free MMAE maintains ADC efficacy, whereas near-complete neutralization can attenuate anti-tumor activity, and support dose selection strategies that preserve the therapeutic contribution of bystander killing.

Effect of GB-4362-mediated reduction of free MMAE on EV antitumor activity



In both good laboratory practice (“GLP”) and non-GLP NHP studies, GB-4362 showed linear, dose-proportional pharmacokinetics and dose-dependent neutralization of free MMAE when co-administered with EV dosed at 3 mg/kg and 4 mg/kg respectively. As depicted in the table below, the 28-day GLP repeat-dose study further showed that GB-4362 was generally well tolerated up to 100 mg/kg weekly, in combination with EV, with no GB-4362-attributed adverse findings and a No Observed Adverse Effect Level (“NOAEL”) and Highest Non-Severely Toxic Dose (“HNSTD”) of 100 mg/kg.

28-Day GLP Study - Summary (Mean ± SD) of Cycle 1 free MMAE following IV administration of EV alone or in combination with GB-4362

Group	Treatment	Free MMAE Cmax (pg/mL)	Free MMAE AUC0-7days (day*pg/mL)	Cmax Ratio (Relative to EV alone Group 2)	AUC Ratio (Relative to EV alone Group 2)
2 *(N = 9)*	3 mg/kg EV	119 ± 37.0	524 ± 126	-	-
3 *(N = 6)*	3 mg/kg EV + 3 mg/kg GB-4362	32.3 ± 13.4	134 ± 46.3	0.271	0.255
4 *(N = 6)*	3 mg/kg EV + 30 mg/kg GB-4362	< LoQ	< LoQ	< LoQ	< LoQ
5 *(N = 10)*	3 mg/kg EV + 100 mg/kg GB-4362	8.11 ± 11.9	< LoQ	0.068	< LoQ

SD=standard deviation; LoQ= Limit of Quantification; * Reported as combined-sex. For NC, MMAE concentrations were below the lower limit of quantification. In Cycle 4 (not shown), free MMAE reduction was impacted due to emergence of ADAs.

In a 28-day non-GLP study, GB-4362 at 0.5-4 mg/kg with 4 mg/kg EV reduced free MMAE exposure (C_{max} and AUC) across all dose levels. There was decreased incidence and severity of Grade 3-4 neutropenia and EV-related skin findings, with delayed onset of neutropenia at 2-4 mg/kg, as illustrated in the table below. Additionally, in cynomolgus monkeys, a reduction in hematologic and skin toxicities was observed in a dose-dependent manner.

28-day non-GLP NHP Study: Grade 3/4 neutropenia of cynomolgus monkeys treated with EV alone or in combination with GB-4362

Group	Treatment	Grade 3+ Neutropenia (%)a	Grade 4 Neutropenia (%)b	Free MMAE % (AUC0-1week)	Free MMAE % (AUC0-2week)	Time-to-Neutropenia Grade 3+ (days)c	Time-to-Neutropenia Grade 4 (days)c
2	4 mg/kg EV	3/3 (100%)	3/3 (100%)	100	100	8 (6-8)	8 (6-9)
3	4 mg/kg EV + 0.5 mg/kg GB-4362	2/2 (100%)	2/2 (100%)	59	74	7.5 (7-8)	8.5 (8-9)
4	4 mg/kg EV + 2 mg/kg GB-4362	2/2 (100%)	1/2 (50%)	28	52	12 (10-14)	14 (14-14)
5	4 mg/kg EV + 4 mg/kg GB-4362	1/3 (33%)	1/3 (33%)	13	32	14 (14-14)	14 (14-14)

[a] Grade 3+ neutropenia is defined as ANC < 1 x 10^3 cells/µL

[b] Grade 4 neutropenia is defined as ANC < 0.5 x 10^3 cells/µL

[c] Time-to-neutropenia is defined as the time from dose administration to the first occurrence of neutropenia reported as median (min-max) days

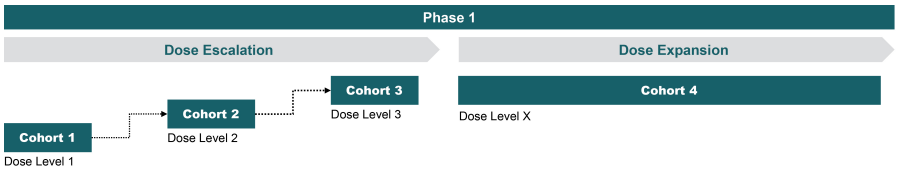
In both NHP studies, attenuation of EV-associated hematologic and skin toxicities, together with robust MMAE lowering, supported the hypothesis that roughly 50% reductions in free MMAE are expected, which should meaningfully mitigate MMAE-driven toxicity while preserving ADC activity, and provide a strong preclinical foundation for the planned clinical development of GB-4362.

While peripheral neuropathy itself is not reliably modeled preclinically, the observed dose-dependent reduction of circulating MMAE, coupled with mitigation of other established MMAE-driven toxicities in the two NHP studies, provides a mechanistically grounded basis for our belief that GB-4362 has the potential to reduce the incidence and/or severity of peripheral neuropathy in patients treated with EV.

Next Steps

We submitted an IND for GB-4362 in early December 2025 and, subject to receiving authorization from the FDA to proceed, we plan to promptly initiate a Phase 1 trial. The planned Phase 1 clinical trial is an open-label, multi-center, dose-finding trial in participants with locally advanced or metastatic urothelial cancer who are receiving standard-of-care first-line therapy with EV plus pembrolizumab. As depicted in the figure below, the planned clinical trial design includes a dose escalation portion and a dose expansion portion. In the dose escalation portion, dose levels will be evaluated in three cohorts of six participants, and free MMAE serum levels will be assessed in Cycle 1 of EV plus pembrolizumab. GB-4362 administration will begin in Cycle 2 as an IV infusion on Day 1 and Day 8 after completion of EV and pembrolizumab administration to assess safety, PK and free MMAE levels. Each cohort dose level will be determined based on the reduction of free MMAE serum exposure observed in the previous cohort.

Overview of Phase 1 clinical trial design for GB-4362



- Enroll 1L metastatic or advanced urothelial carcinoma treated with EV plus pembrolizumab
- *Escalation* – Dose finding and early proof of mechanism based on ~50% free MMAE reduction upon co-administration of GB-4362 in Cycles 2 and 3
- *Expansion* – confirm safety, PK/PD and free MMAE reduction and explore incidence and severity of Peripheral Neuropathy (PN), dose modifications and impact on anti-tumor activity. Early PoC measuring reduction in Grade 1 PN to Grade 2 PN progression under consideration
- N = 6-9 per escalation cohort and up to N = 30 in expansion cohort

Following dose-finding, we plan to conduct an expansion cohort to evaluate GB-4362 safety, pharmacokinetics and pharmacodynamics and impact on free MMAE reduction. Our analyses of exploratory endpoints are expected include impact on incidence and severity of peripheral neuropathy, impact on dose modifications for EV, and impact on antitumor activity. Using the expansion portion of the study as an early proof of concept is under consideration and, if we determined to proceed, we plan to evaluate GB-4362 in patients who develop their first sustained Grade 1 peripheral neuropathy while receiving EV plus pembrolizumab for the treatment of 1L muC. This single-arm signal-finding expansion would be designed to determine whether early addition of GB-4362 can prevent progression to Grade ≥2 neuropathy, a functionally limiting and often irreversible toxicity that leads to EV dose reductions, interruptions and discontinuation. Secondary measures would potentially include time to Grade ≥2 neuropathy, incidence of Grade ≥3 events, EV dose intensity and discontinuation due to neuropathy and patient-reported outcomes.

GB-5267: A MUC16 CAR-T Cell Therapy

Overview

GB-5267 is an armored, MUC16-directed CAR-T cell therapy engineered using the Generate Platform to address unmet needs in solid tumors, which we are initially developing for the treatment of platinum-resistant ovarian cancer. While CAR-T therapies have significantly advanced treatments for liquid tumors, CAR-T therapies have historically shown limited efficacy in solid tumors largely because the tumor microenvironment (“TME”) is profoundly immunosuppressive and structurally restrictive. GB-5267 was designed to have a high-affinity MUC16 binder and cytokine-based armor in order to enhance T-cell activation, proliferation and persistence within the TME while maintaining strict MUC16-dependent specificity. We are developing GB-5267 in collaboration with Roswell Park, who submitted an IND to the

FDA for GB-5267 in early December 2025. We plan to initiate a Phase 1 clinical trial in , subject to receiving authorization from the FDA to proceed. This open-label trial will assess safety and tolerability following intravenous dose escalation and could subsequently explore in combined IV and local IP administrations in an expansion cohort. Secondary objectives are expected to include PK/PD assessments, characterization of CAR-T cell persistence, and preliminary anti-tumor activity. In preclinical studies, GB-5267 showed proliferation and cytotoxicity across multiple donors and no activity on MUC16-negative cells. As we evaluate GB-5267 clinically, we may investigate its use in earlier-line ovarian cancer settings if it shows benefit in later-line ovarian cancer.

Unmet Need and Generate Value Proposition

CAR-T therapies have transformed the treatment of hematologic malignancies because circulating tumor cells are readily accessible to engineered T cells; target antigens such as CD19 are uniformly expressed and minimally present on essential healthy tissues, and the blood and lymphoid compartments provide a supportive environment for CAR-T trafficking, expansion and persistence. In contrast, solid tumors present a far more complex therapeutic challenge: tumor antigens are often heterogeneous or shared with normal tissues, and CAR-T cells must infiltrate a dense, fibrotic stroma and overcome a profoundly immunosuppressive microenvironment enriched with checkpoint ligands, suppressive myeloid cells, regulatory T cells, hypoxia, and metabolic stressors that inhibit T-cell function. These barriers have historically limited the potency, persistence, and safety of CAR-T therapies in solid tumors, preventing the type of clinical breakthroughs achieved in liquid tumors. Our approach to addressing these challenges with GB-5267 was to design a CAR-T with high-affinity and potency, selective recognition of membrane-bound MUC16 to overcome antigen heterogeneity, and combined with cytokine armoring designed to enhance CAR-T activation, help recruit endogenous immune cells, and remodel the suppressive tumor microenvironment. Together, these attributes aim to improve trafficking, persistence, and functional activity within the peritoneal tumor bed, supporting the potential for a more durable and effective CAR-T response in ovarian cancer.

Ovarian cancer remains one of the most lethal malignancies in women. It is a major cause of cancer-related death in females in the United States, with an estimated 20,890 new cases expected in 2025 and approximately 250,000 women currently living with the disease. Because early symptoms are typically nonspecific, more than half of patients present with distant, metastatic disease at diagnosis, where outcomes are poor and effective treatment options remain limited. While five-year survival rates across all stages can approach 50%, advanced-stage survival is approximately 32%. Prognosis worsens further once disease becomes platinum-resistant, which is defined as recurrence within six months of platinum therapy, a state driven by mechanisms such as enhanced homologous recombination repair, increased drug efflux and alterations in tumor suppressor pathways.

There are no curative therapies for platinum-resistant ovarian cancer. Outcomes remain poor with objective response rate (“ORR”) under 30% when patients are treated with the current standard of care, which consists of single-agent chemotherapies. The addition of bevacizumab to chemotherapy, has improved progression-free survival but has not produced meaningful overall-survival benefit. Even targeted agents, including PARP inhibitors (*e.g.*, niraparib, olaparib and rucaparib), which originally received accelerated approval and showed promise for BRCA-mutant tumors (approximately 20% of ovarian cancers), were withdrawn for multiple platinum-resistant indications in 2022 following detrimental overall survival signals in confirmatory trials. While there has been some progress in the clinic for FRα-expressing tumors, they also reinforce that durable benefit remains elusive.

Although multiple investigational modalities are being evaluated in platinum-resistant ovarian cancer, success has been mixed so far. These challenges highlight the need for novel modalities capable of overcoming tumor-intrinsic resistance mechanisms and profoundly immunosuppressive TMEs. We believe that GB-5267 has the potential to overcome some of the challenges associated with developing cell therapy in solid tumors given its optimized design and added armoring.

Potential Mechanism of Action and Rationale

CAR-T therapies have historically failed in solid tumors due to poor tumor infiltration and accessibility and the immunosuppressive TME. Solid tumors often impede T-cell trafficking and infiltration through dense stroma and abnormal vasculature, and once inside the tumor, CAR-T cells encounter high concentrations of inhibitory cytokines, suppressive myeloid cells, regulatory T cells and checkpoint ligands such as PD-L1 that blunt activation and promote exhaustion. In addition, chronic antigen exposure and metabolic stress—driven by hypoxia, low glucose, and high lactate—further limit CAR-T persistence and cytotoxic function. Together, these barriers have prevented traditional CAR-T constructs

from achieving durable expansion, sustained activity, and meaningful clinical responses in most solid tumor settings.

We believe that MUC16 represents a compelling therapeutic target for the treatment of ovarian cancer, particularly platinum-resistant ovarian cancer where the unmet need remains high. MUC16 is a high-molecular-weight, membrane-anchored mucin expressed by approximately 80% of ovarian tumors, but largely restricted in normal tissues. MUC16 contributes to tumor immune evasion, adhesion and metastasis through interactions with mesothelin and activation of PI3K/AKT, MAPK, and NFκB signaling. Its high prevalence combined with limited normal-tissue expression provides an opportunity for a strong therapeutic index for targeted cell therapies.

GB-5267 is therefore engineered as a high-affinity MUC16-specific single-chain variable fragment ("scFv") to enable precise targeting of MUC16-positive ovarian cancer cells, capitalizing on near-ubiquitous expression in advanced disease. The incorporation of a 4-1BB/CD3ζ signaling domain is intended to enhance potential T-cell proliferation, persistence and metabolic fitness, which are key determinants of durable responses in hostile solid-TMEs. The addition of armoring is designed to enable investigational GB-5267 CAR-T cells to secrete cytokines that stimulate IFN-γ production. This activity is designed to help recruit natural killer ("NK") cells and cytotoxic T cells to the tumor site. In addition, armoring is designed to recondition the TME toward a pro-inflammatory state, potentially strengthening both CAR-mediated and endogenous immune responses.

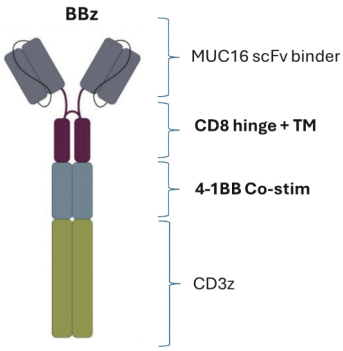
Technology Approach and Molecular Characteristics

CAR-T cells are composed of a T-cell with a CAR, which contains an extracellular binding domain, hinge region, transmembrane domain, and co-stimulatory-activation intracellular signaling domain; CARs may also contain armor such as on/off peptide switches, cytokines or chemokines.

GB-5267 was designed using our Generate Platform, which was applied to optimize multiple molecular attributes, including proliferative and functional persistence as well as robust and stable CAR expression. Within six months, we went from concept to product candidate nomination and were able to achieve molecular characteristics for our binder, surpassing our lead candidate criteria and overperforming reference constructs across key components of GB-5267.

As shown in the figure below, key design components of GB-5267 include (i) a human anti-MUC16 single-chain variable fragment ("scFv") extracellular binding domain for targeting tumors that express MUC16; the scFv of GB-5267 is paired to a CD8 hinge and transmembrane ("TM") domain; (ii) a human 4-1BB costimulatory domain fused to CD3ζ for T-cell activation and persistence; and (iii) armoring to enhance the proliferation and recruitment of endogenous immune cells.

Key design components of GB-5267



We believe the optimized design features, including potential for expression, potency, and functional persistence of investigational GB-5267, and functional enhancement from the armoring, provide strong rationale for low dosing for patients with potential for clinical activity in the ovarian cancer TME.

Opportunities for Development in Additional Indications

While GB-5267 development is initially focused on platinum-resistant ovarian cancer; the biology of MUC16 and the modularity of the armored CAR platform could provide for label and indication expansion. Given the high MUC16 prevalence in newly diagnosed and recurrent ovarian cancer, we may consider exploring development in earlier lines of therapy for ovarian cancer. Other MUC16-positive solid tumors, such as subsets of pancreatic, endometrial and gastrointestinal tumors, could also be of interest and enable development in additional indications in the future.

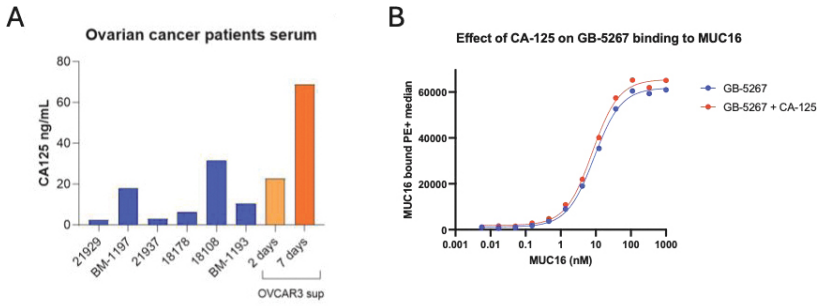
Preclinical Data

In preclinical studies, GB-5267 showed high target selectivity, antigen-dependent activation, active cytokine armoring consistent with its design, and robust *in vivo* activity across clinically relevant routes of administration, with a low predicted risk of off-tumor toxicity, supporting progression into patients.

In Vitro Pharmacology and Selectivity

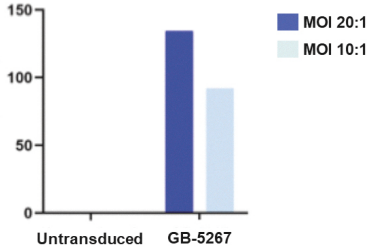
In *in vitro* pharmacology studies, GB-5267 CAR-T cells bound full-length, non-cleaved MUC16 with high specificity and showed no measurable binding to soluble CA-125 (as illustrated in the figure below). CA-125 is the cleaved, shed extracellular fragment of MUC16. It is released into the bloodstream and peritoneal fluid as tumors grow, making it one of the most widely used biomarkers in ovarian cancer for disease detection, monitoring treatment response and identifying recurrence. Potential selectivity for membrane-bound MUC16 ensures that GB-5267 engages only tumor-associated antigen rather than the abundant shed CA-125 circulating in serum, which can create an antigen sink and blunt CAR-T activity.

Impact of soluble CA125 on MUC16 binding affinity



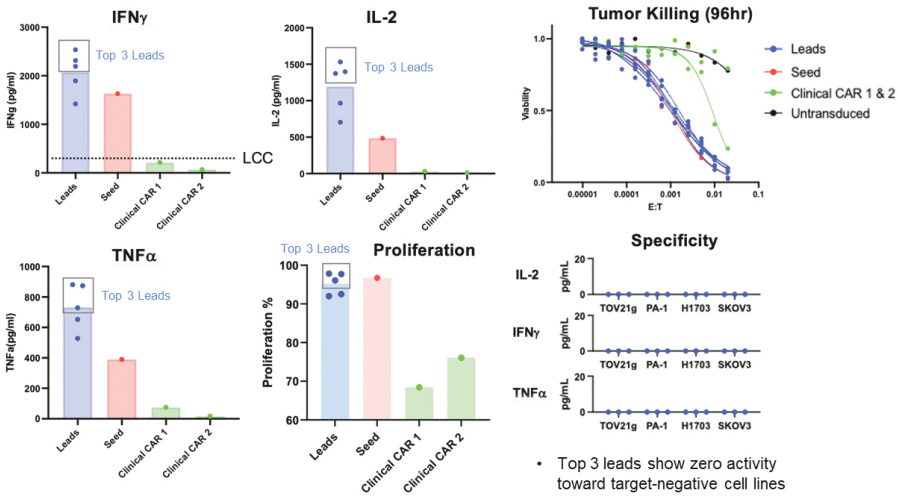
As shown in the figure below, GB-5267 also secreted armoring cytokine in a basal and antigen-enhanced manner, with cytokine output scaling with CAR expression (Multiplicity of infection ("MOI")). Untransduced T-cells did not secrete armoring cytokine under the same conditions.

Cytokine secretion (pg/mL) by GB-5267



As shown in the figure below, in co-culture assays, GB-5267 induced IL-2, IFN-γ, and TNF-α secretion, proliferation, and cytotoxicity only in MUC16-positive OVCAR3 tumor cells, and we observed no activation or killing across multiple MUC16-negative epithelial or tumor cell lines.

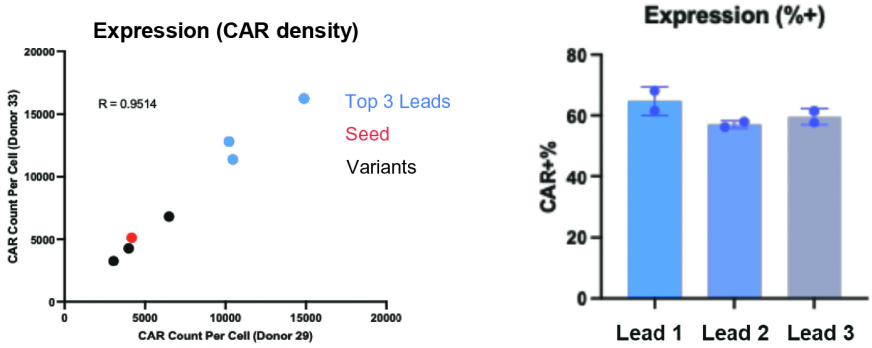
***In vitro* cytokine production, proliferation, specificity and tumor killing for high potential leads, including GB-5267 across cell lines**



- Top 3 leads show zero activity toward target-negative cell lines

As shown in the figure below, GB-5267 showed optimized expression parameters across density with high CAR count per cell across multiple donors, as well as high percent of expressing T-cell.

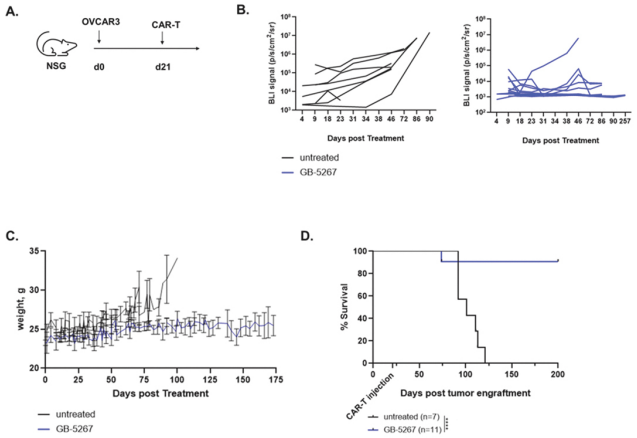
CAR density and expression for high potential leads including GB-5267



In an orthotopic intraperitoneal OVCAR3 tumor model, GB-5267 reduced tumor burden by bioluminescent imaging, delayed ascites-associated weight gain and extended survival relative to untreated controls. GB-5267 CAR-T cells persisted *in vivo*, with substantial human CD45 chimerism and CAR expression detected on CD4+ and CD8+ T-cell subsets several weeks post-infusion. Additional

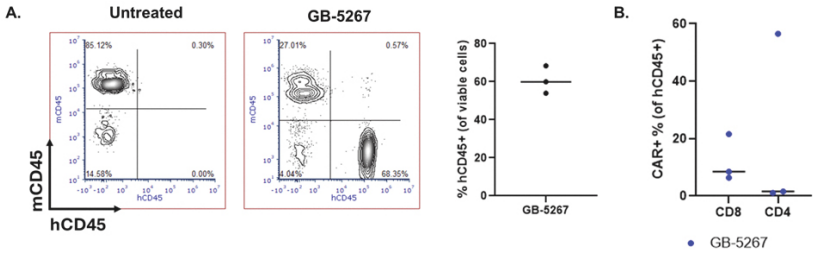
studies using IV, IP, and split IV plus IP routes demonstrated rapid and profound tumor debulking, supporting evaluation of both systemic and regional administration in the clinic.

***In vivo* efficacy of GB-5267 CAR-T cells in orthotopic tumor (OVCAR3 [MUC16+])**



A. Schematic of experimental design **B.** BLI images from untreated, or mice receiving GB-5267, or 4H11-BBz-IL-18 IP at various days post treatment. Average radiance was plotted. **C.** Mouse weights monitored after treatment. **D.** Survival curves from mice in this experiment. Error bars represent SEM.

CAR-T cells persisted *in vivo* in orthotopic tumor model



A. Representative flow plots demonstrating the percentage of mouse CD45 ("mCD45") vs human CD45 ("hCD45") from viable cells isolated from peripheral blood. Blood was collected from retro-orbital bleeds 39 days post CAR-T treatment. Aggregate data of the hCD45+ percentage from all mice collected. **B.** CAR% detected on hCD8+ or hCD4+ T-cells.

Non-tumor-bearing mice engrafted with GB-5267 at pharmacologically active doses did not exhibit sustained weight loss for up to approximately 80 days, supporting preliminary tolerability within the known limitations of xenograft systems. Cross-reactivity studies across primary human cells and tissues showed strong GB-5267 binding to MUC16-positive ovarian tumor samples, with minimal binding, activation, or cytotoxicity in normal tissues and only rare, low-level signals not associated with cell death. These findings support a low predicted risk of on-target/off-tumor or off-target toxicity.

Collectively, these data suggest that GB-5267 may be a potent, MUC16-selective, armored CAR-T cell therapy candidate with antigen-dependent functional activity, durable *in vivo* persistence, and

favorable preclinical safety characteristics, supporting advancement into first-in-human evaluation in platinum-resistant ovarian cancer.

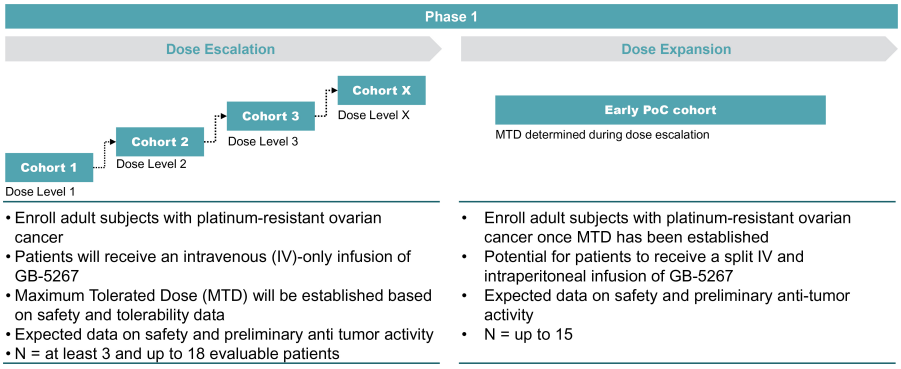
Next Steps

Our collaboration partner, Roswell Park, submitted an IND for GB-5267 in early December 2025. We jointly plan to initiate a first-in-human, multi-arm, open-label Phase 1 clinical trial evaluating the safety, tolerability, cellular kinetics and preliminary antitumor activity of GB-5267 in up to 18 adults with platinum-resistant ovarian cancer in , subject to receiving authorization from the FDA to proceed. As depicted in the figure below, the trial includes a dose escalation portion and a dose expansion portion. The planned primary endpoints of the trial are an assessment of safety and dose-limiting toxicities and the secondary endpoints are an evaluation of PK and CAR-T persistence, and exploratory endpoint of preliminary clinical activity.

The trial is designed to evaluate GB-5267 first through IV administration, followed by an evaluation of combined IV and intraperitoneal regimen. Platinum-resistant ovarian cancer commonly presents with disease confined to or spreading within the peritoneal cavity, making IP administration an attractive strategy to achieve high local concentrations of therapeutic cells. However, we believe that systemic delivery via IV infusion remains critical to target potential metastatic sites outside of the peritoneal cavity to ensure adequate systemic immune activation. By combining IV and IP infusions of investigational GB-5267, the trial seeks to assess the potential benefits of both routes.

Unlike traditional CAR-T trials, the protocol does not include lymphodepleting chemotherapy prior to GB-5267 administration, a key differentiator in our clinical development approach. The potent immune-stimulatory properties of the armored construct are expected to support CAR-T expansion, activate endogenous immune pathways, and promote pro-inflammatory TME without the need for lymphodepletion. Moreover, lymphodepleting agents may attenuate the inflammatory milieu required for optimal cytokine-mediated activity. The need for lymphodepletion may be reassessed as clinical and translational data emerge and may be incorporated in future protocol amendments if deemed necessary to enhance the therapeutic profile of GB-5267.

Overview of Phase 1 clinical trial design for GB-5267



Collaboration with Roswell Park

See *"Our Collaborations with Biopharma and Beyond—Collaboration with Roswell Park*" below.

Other Preclinical Programs

The Generate Platform and its modular capabilities enable us to continue explore and evaluating potential additional programs and product candidates across various modalities and biological applications that can deliver meaningful benefits to patients. In this regard, we are currently advancing

multiple innovative preclinical programs from the Generate Platform, each designed to address areas of substantial unmet need.

One example is a next-generation ADC leveraging a modular capability for optimization for function to enhance internalization and cytotoxicity against a target with naturally low internalization rates. Traditionally discovered antibodies have demonstrated proof-of-mechanism but suffer from inconsistent efficacy, due to inefficient antigen internalization. Using our modular capabilities, our lead ADCs have shown upwards of ten-fold improved internalization and up to seven-fold greater cytotoxicity across cell lines versus benchmarks. As such, we believe we can design an antibody with meaningful improvements to internalization kinetics, anti-tumor activity and therapeutic index. Another example is a bispecific T-cell engager ("TCE") being developed in collaboration with MD Anderson. Through successive design and generation cycles, we engineered many bispecific TCEs enabling rapid exploration of affinity, epitope, and cytokine-release profiles in a highly parallelized format. Lead proteins emerging from this framework demonstrated balanced potency and cytokine-release characteristics, favorable developability and preclinical safety properties as well as TCE-mediated tumor regression.

Pending upcoming preclinical data readouts, these programs are progressing towards product candidate nomination. They underscore our strategy to efficiently advance programs which apply our Generate Platform to solve a difficult biological challenge and which have potential to deliver meaningful therapeutic impact in areas of high unmet need.

Our Collaborations

We have sought collaborations with pharmaceutical and biotechnology companies that enable us to leverage our distinct capabilities, while improving our Generate Platform. Our initial collaborations with Amgen and Novartis are more general examples of these kinds of collaborations—ones where the partner shares targets of interest with a desire to develop protein-based therapeutics where there have been significant challenges using traditional drug discovery methods. We then deploy our Generate Platform toward solving these challenges. Once achieving certain predefined criteria, the partner, at its discretion, may take on further development toward the clinic and commercialization.

Our partners have proposed programs that cover a variety of protein-based modalities, a range of therapeutic areas, and many biological challenges. The common denominator in these programs is that they leverage the protein optimization and *de novo* generation capabilities of our Generate Platform. As such, these collaborations offer valuable opportunities to deliver quality product candidates to our collaboration partner, develop the Generate Platform toward broader potential applications with the benefit of partner funding, and provide the potential for us to receive significant milestones and royalties if the partner chooses to advance programs into the clinic and commercialize.

In addition, we have a collaboration agreement with Pioneering Medicines 02, Inc. ("PMCo"), an affiliate of Flagship Pioneering, pursuant to which we and PMCo have agreed to share research and development costs for GB-0895. This collaboration was established to provide funding and certain support in preclinical development that we had not yet built. For more information about our collaborations with Amgen, Novartis and PMCo, see "*—License and Collaboration Agreements*."

In addition, we also have co-development and commercialization collaborations in place with Roswell Park and MD Anderson. These collaborations have enabled us to extend the reach of our Generate Platform towards potentially valuable oncology applications while leveraging the respective CAR-T manufacturing and clinical development expertise of Roswell Park and the biology and clinical development expertise of MD Anderson, respectively. Both of these collaborations have a 50/50 style arrangement for cost- and profit-sharing.

As we consider future Generate Platform collaborations, we will particularly consider those that could provide data that improves our modular capabilities and therapeutic applications, particularly in areas that we have already prioritized, or will prioritize in the future. Our prioritized applications are expected to continue to evolve as we identify areas in which our Generate Platform exhibits differentiation in certain domains that have meaningful therapeutic opportunities should those modules be unlocked. The benefit of this targeted collaboration approach is that it provides the opportunity to unlock new modules and applications, broadening the reach of our Generate Platform in an efficient manner.

Beyond these types of collaborations, as we advance our programs and product candidates, we may also opportunistically explore licensing, commercialization and other partnership and collaboration arrangements with global pharmaceutical companies to enhance our development or commercialization

efforts. These types of partnership, collaboration and other arrangements could enable us to pursue additional programs and product candidates, secure additional capital and maximize the potential of our technology toward solutions for patients suffering from a wide range of diseases.

Collaboration with Roswell Park

In October 2023, we entered into a collaboration agreement with Roswell Park to design and develop CAR-T cell therapies and armoring technologies for up to three oncology targets, including in solid tumors. The collaboration combines the programmability and scalability of the Generate Platform for rapid discovery and optimization and Roswell Park's expertise in cell therapy design, clinical development, and manufacturing. Under the agreement, we and Roswell Park agreed to share research and development expenses as well as profits generated through commercialization of any jointly-developed products. Unless otherwise agreed upon, Roswell Park will serve as a site for, and recommend lead investigator for, Phase 1 and 2 clinical trials of any jointly-developed product candidates. GB-5267 is the first of these product candidates.

As part of an expansion of Roswell Park's cell therapy capabilities, they have heavily invested in cell therapy manufacturing and in clinical development expertise making them an ideal partner for us. For example, the collaboration continues the significant momentum associated with Roswell Park's recently announced expansion, supported in part by New York State funds, which will make Roswell Park's Current Good Manufacturing Practice ("cGMP") facilities the largest academic cell therapy center in the United States. Additionally, and as a key consideration for us in entering this collaboration, Roswell Park recently recruited several leading clinicians to lead their cell therapy practice including Dr. Reinier Brentjens whose lab played a foundational role in development of several currently approved cell therapies. Dr. Brentjens together with Dr. Marco Davila and their team are among the world's leading experts in cell therapy.

Collaboration with MD Anderson

In April 2023, we entered into a co-development and commercialization collaboration agreement with MD Anderson to discover and develop protein therapeutics for up to five oncology targets. The collaboration combines our integrated machine-learning capabilities and experimental/wet lab capabilities, which are powered by the Generate Platform, with MD Anderson's clinical research expertise and the translational research and drug development capabilities of the MD Anderson's Therapeutics Discovery division.

Under the agreement, we and MD Anderson agreed to share research and development expenses as well as profits generated through commercialization of any jointly-developed products. Unless otherwise agreed upon, MD Anderson will serve as a site for and recommend lead investigators for Phase 1 and 2 clinical trials of any jointly-developed product candidates. As described above, the first program from our collaboration is a bispecific TCE.

The Generate Platform Deep-dive: How the Generate Platform Works and What it Produces

Introduction and Impact

Our vision is to program biology to generate optimal therapeutics for the greatest impact on human health. Central to our vision is the Generate Platform, which is designed to be a therapeutic area and protein modality agnostic system integrating computational innovation with scalable biohardware to address therapeutic challenges beyond the reach of traditional discovery methods.

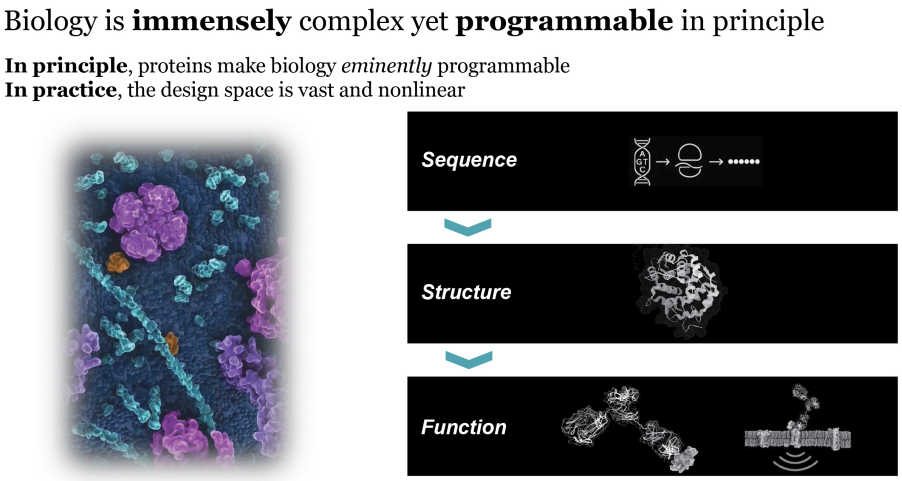
Biology is an information science. DNA encodes biological function through the way its sequence determines the structure and activity of the molecules it produces, which, in principle, makes biology programmable. In practice, however, the immense complexity of biology has made programming it very difficult. Historically, drug discovery has emphasized two general approaches to manage this complexity. One approach was an intentional, mechanically guided design approach at low-throughput. The other was a high-throughput experimental exploration approach that was generally less able to encode specific intent. We believe that dramatic reductions in the cost of compute and the cost of making and measuring DNA and proteins enables a new paradigm: intentionality at scale. In this paradigm, our generative models learn generalizable design principles from data to generate hypotheses at scale, and scalable experimental systems verify those hypotheses. The Generate Platform was built to implement this paradigm, generating large numbers of specific molecular and biological hypotheses in response to pre-specified therapeutic objectives and rapidly tests them. We believe intentionality at scale is foundational

to achieving programmable biology: enabling systematic generation of medicines across therapeutic areas and protein modalities while producing proprietary data that improves our generative models over time.

The Generate Platform integrates generative and predictive models that learn design principles from proprietary data—*e.g.*, diffusion-based models (such as our Chroma model) and graph neural networks, among other architectures—with advanced experimental biohardware systems for scalable verification. Our biohardware systems include scalable DNA assembly, rapid protein production, and high-throughput, multiplexed assay miniaturization enabling us to measure up to billions of molecules per generation cycle, as well as a Cryo-EM core for high-content structural data generation, which has produced more than 250 structures in 2025 alone. These capabilities significantly reduce the cost and time per assay data point, tightening the loop between generative models and real-world biological verification.

We built our Generate Platform around proteins because we believe proteins are essential to truly program biology. Proteins occupy the critical junction of biology's information flow: they bind, signal, catalyze, traffic, and assemble into complex structures that support life. The behavior of a protein is specified by its linear amino acid sequence, which is encoded in DNA. These sequences constitute biology's natural computational language, which determine how that protein folds – its structure – and from there how the protein interacts with its environment, driving protein function. Biology's natural computational language is what enables us to potentially program biological functions directly (as shown in the figure below). By specifically encoding therapeutic intent into a sequence and precisely "writing" a protein's function, we can design proteins to deliver intended therapeutic impacts. Furthermore, the nature of proteins enables an ideal closed-loop system: generative models propose sequences, DNA encodes them, and high-throughput experiments characterize these proteins, generating functional data for continuous and iterative improvement.

Therapeutic proteins: our programming interface to biology



To deliver an increasingly programmable approach to biology, our Generate Platform is a tight and fully-integrated loop of computational innovation and scalable biohardware, which allows us to generate valuable proprietary data-sets, including sequence, structure, and function, that in turn further inform and refine our computational engine to generate better protein proposals for any given biological or therapeutic challenge (as shown in the figure below), and enabling compounding improvements in the Generate Platform over time.

The Generate Platform is designed to systematically decode and comprehend biology at speed and magnitude

Our solution: The Generate Platform

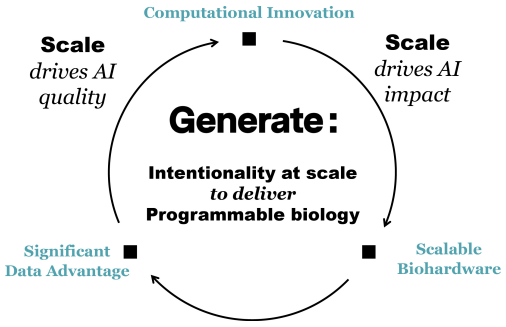
Integrated computational and biohardware innovation for **intentionality at scale**

ML scales hypotheses

- molecules and biological hypotheses generated at scale using models + agents

Data compounds

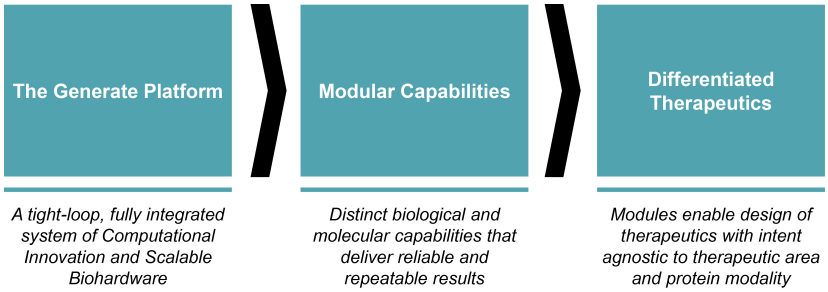
- each cycle creates proprietary therapeutically-relevant data that improves the next cycle



Our Generate Platform is designed to implement intentionality at scale by coupling AI models that generate large numbers of design hypotheses with scalable experimental biohardware that verifies them. Each time we engineer, build and then test a set of hypotheses, we generate experimental data that is intended to improve the Generate Platform. We package certain of these learnings into reusable modules —validated capabilities that can be applied across targets and modalities towards differentiated therapeutics.

To date, our Generate Platform has enabled us to develop numerous modular capabilities, many of which have already demonstrated the ability to successfully translate computationally engineered proteins into human clinical testing. In addition, we are currently exploiting our modular capabilities for other potential therapeutic applications, including oncology and other historically difficult to treat diseases.

The Generate Platform is oriented towards differentiated therapeutics generation



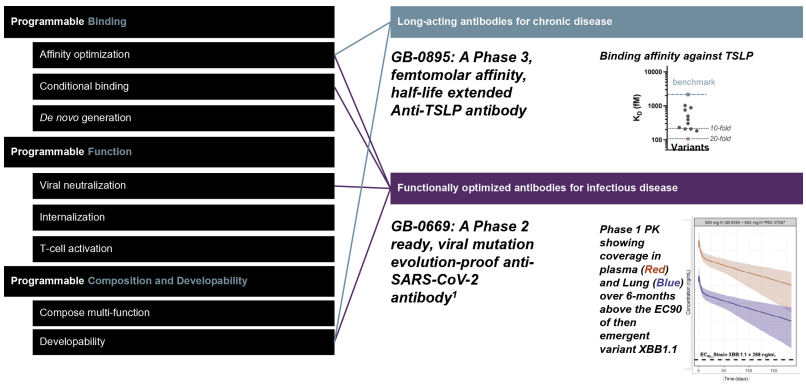
We believe this approach is scalable, reliable and reusable and enables an increasingly low-cost way of generating proteins that accurately implement specified biological intentions and allow for the exploration of significantly more ideas than a one-by-one discovery approach. Our Generate Platform and resulting modular capabilities enable us to address questions like: “What if we wanted to compare optimal internalization across five distinct epitopes of a tumor antigen?” or “What if we wanted to compare the pharmacology of selective agonism across four related but different receptors classically agonized by a single ligand?” We can now make these “many good ideas tested all at once” approaches feasible, positioning us to pursue complex biology at a low cost, potentially resulting in more rapidly developed, higher quality product candidates.

Our initial focus in building modular capabilities was on one of the most fundamental ways proteins mediate biology: binding. We have leveraged this starting point to expand capabilities to include (i) binding with context, including selective and conditional target binding, and (ii) protein design for a desired function, including viral neutralization, receptor mediated internalization, and receptor function. In parallel we have invested in a set of capabilities focused on developability, including models, data and workflows that enable us to produce candidates with drug-like properties by design, right from the point of generation. While we continue to develop additional modular capabilities, the following have been deployed in programs from our early-stage preclinical programs to our lead product candidate:

- **Programmable Binding**
  - **Affinity optimization:** Tune binding affinity, up or down, for desired outcomes, *e.g.*, PK/PD characteristics such as target engagement as for GB-0895, anti-IL-13 and other preclinical proteins targeting OX40L, TL1A and IL-23p19
  - **Conditional binding:** Bind (i) given condition, *e.g.*, bind tightly at pH 7.4 but significantly less at pH 6.0, or (ii) with selectivity, *e.g.*, tune affinity to remove cross-reactivity of an existing ligand and allow binding to only one of two receptors – or alternatively add cross-reactivity to cause a desired binding profile to related receptors or to enable binding both human and cyno target variants
  - ***De novo* generation:** Design a completely novel binder to a pre-defined epitope, allowing intentional engagement or potentially exploration of a series of binding epitopes
- **Programmable Function *De novo***
  - **Viral neutralization:** Neutralization across virus strains, as for GB-0669
  - **Receptor internalization:** Enhance receptor internalization and payload delivery for a given binding epitope, without including pH dependence
  - **T-cell activation:** Antigen specific T-cell activation for selective tumor killing, or optimization of CAR constructs for more effective tumor killing as for GB-5267
- **Programmable Composition and Developability**
  - **Compose multi-function:** Graft and fuse protein modules with different functions
  - **Developability:** Manufacturability, *e.g.*, aggregation, viscosity, as with GB-0895, anti-IL-13, GB-4362 and other product candidates and programs

As shown in the figure below, many of our modular capabilities have now been translated into therapeutic protein product candidates across our programs and product candidates. We share some further details in two case studies below.

Overview of Modular Capability Case Studies



[1] Development paused for commercial reasons.

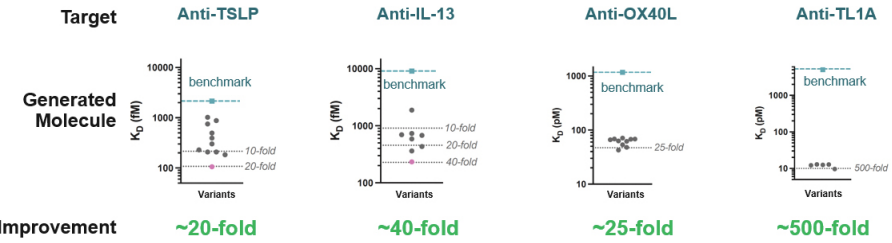
Case Study: GB-0895: An Anti-TSLP Monoclonal Antibody

We have deployed our Generate Platform to create modular capabilities designed to address rate-limiting challenges in affinity optimization and developability, which is exemplified by our lead product candidate, GB-0895, an anti-TSLP monoclonal antibody candidate for the treatment of severe asthma.

We determined through PK/PD modeling that if we applied a validated half-life extension technology (in this case a YTE mutation), femtomolar binding affinity to the TSLP target would likely still be required to reach the proposed dosing interval. We are not aware of any approach that has successfully reached this degree of improvement in binding affinity to this target. Through our Generate Platform, we deployed an affinity optimization modular capability that identifies proteins with multiple folds higher binding affinity than a given reference antibody. This capability, combined with our developability optimization modular capability, enabled us to engineer a highly developable antibody incorporating half-life extension technology and 106 femtomolar binding affinity to the TSLP target, which reached our desired molecular characteristics in two generation cycles.

Our binding affinity optimization modular capability has been refined and deployed repeatedly, delivering significant improvements reliably across many targets, as demonstrated in the figure below. This figure demonstrates that our Generate Platform has allowed a more "programmable" control of affinity optimization across three additional targets beyond GB-0895.

Affinity optimization across four targets demonstrated reliable improvement in binding affinity



In the case of anti-IL-13, we generated a product candidate with 233 femtomolar binding to IL-13, approximately 40-fold tighter binding than lebrikizumab, a leading FDA-approved anti-IL-13 antibody, based on published data. In Phase 1 clinical trials in healthy volunteers, this product candidate showed a near-complete suppression of key biomarkers, a long half-life (with a preliminary estimate of approximately 108 days) and safety data consistent with the IL-13 mechanism. Furthermore, in such trials, this product candidate demonstrated almost double the exposure compared to publicly available data on other clinical-stage long-acting anti-IL-13 antibodies at similar doses. Preliminary data from this product candidate has served as a second clinical proof point for our modular capability of binding affinity optimization and we may evaluate it as a potential combination partner to GB-0895 in the future.

Case Study: GB-0669: A Pan-variant SARS-CoV-2 Neutralizing Antibody

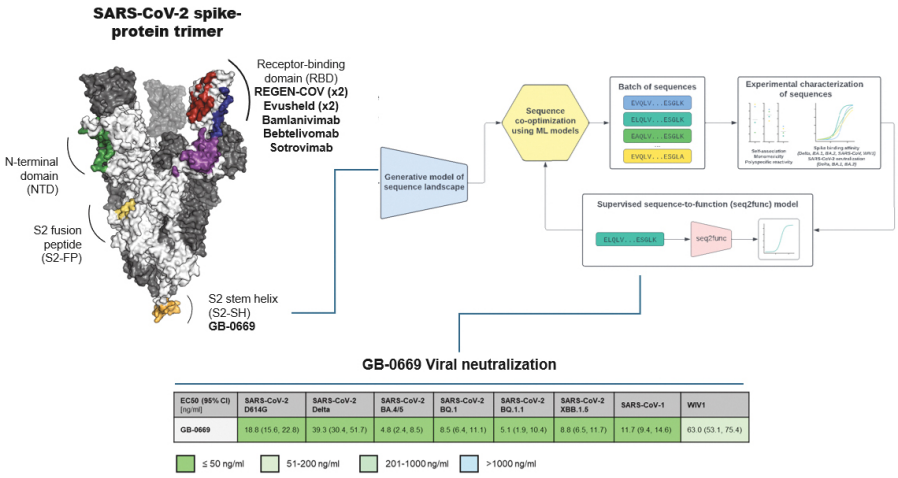
We have also deployed our Generate Platform to create modular capabilities designed to address rate-limiting challenges in conditional binding, viral neutralization and developability, which is exemplified by our first product candidate, GB-0669, an investigational pan-variant anti-SARS-CoV-2 monoclonal antibody studied as pre-exposure prophylaxis ("PrEP") for COVID-19.

Numerous antibodies have been developed and translated into the clinic as treatments or PrEP agents for COVID-19. All antibodies that received Emergency Use Authorization have seen reduced neutralization of the virus due to escape mutations in the domain they predominantly bind: the receptor binding domain of the spike protein. Other, highly conserved, mutationally resistant domains exist on the spike protein, including the S2 domain. Due to its more distant location from the receptor binding domain and the proximity to the membrane, generating a clinically-relevant neutralizing antibody was a challenge.

We developed high-throughput neutralization assay techniques to create a "modular" neutralization optimization capability, which allowed for multiple rounds of computational engineering and experimental validation across seven distinct epitopes and eighteen distinct campaigns over eight months to select the

S2 domain as the targeted the optimal mechanism of action to pursue. This illustrates intentionality at scale: running many targeted design hypotheses in parallel, rapidly learning from experimental outcomes, and converging on an optimal mechanistic strategy. This modular viral neutralization capability to engineer a variant-resistant, therapeutically-relevant neutralizing monoclonal antibody resulted in nomination of GB-0669, a potent binder to the S2 domain. In preclinical studies, GB-0669, which, to our knowledge, remains the only known clinical-stage S2 domain targeted monotherapy candidate, demonstrated the potential for potent, variant-resistant neutralization in serum neutralization assays, as illustrated in the figures below. Results from a Phase 1 clinical trial of GB-0669 were presented in 2024 and published in multiple peer-reviewed publications. Development of GB-0669 was subsequently paused due to changes in the commercial landscape related to PrEP agents for COVID-19. We believe the value of this work extends beyond a single program: it validated a viral neutralization capability that can be reused across future targets and pathogens, de-risking a broader set of opportunities at low marginal cost.

Approach to engineer GB-0669, a mutation resistant anti-S2 domain neutralizing monoclonal antibody



GB-0669 Viral neutralization

EC50 (95% CI) [ng/ml]	SARS-CoV-2 D614G	SARS-CoV-2 Delta	SARS-CoV-2 BA.4/5	SARS-CoV-2 BQ.1	SARS-CoV-2 BQ.1.1	SARS-CoV-2 XBB.1.5	SARS-CoV-1	WIV1
GB-0669	18.8 (15.6, 22.8)	39.3 (30.4, 51.7)	4.8 (2.4, 8.5)	8.5 (6.4, 11.1)	5.1 (1.9, 10.4)	8.8 (6.5, 11.7)	11.7 (9.4, 14.6)	63.0 (53.1, 75.4)

≤ 50 ng/ml | 51-200 ng/ml | 201-1000 ng/ml | >1000 ng/ml

Our Approach to Programmable Biology

Together, these examples illustrate how our modular capabilities translate directly into differentiated product candidates. They also reflect our deeper conviction: programmable biology is only possible when therapeutic intent, computational engineering, and biological data generation operate as a unified system to enable intentionality at scale and a compounding data advantage over time. In the sections following, we outline our approach across:

- Modular capabilities and their translation to therapeutics;
- Computational innovations, including the models that design for protein characteristics given a set of target attributes; and
- Scalable biohardware, including our laboratory and informatics infrastructure, Cryo-EM and high-throughput systems such as microfluidics and pooled assays.

Modular Capabilities to Develop Therapeutics At Scale

The Generate Platform's repeatable modular capabilities or modules serve as building blocks that can be deployed individually or in combination to create diverse therapeutic programs and product candidates to address opportunities that are often out of reach of traditional technologies. We believe

validating a module can de-risk multiple future opportunities by enabling repeatable deployment across targets and modalities.

A key focus area for our modular capabilities relates to a foundational driver of protein function: binding. We leveraged this starting point and expanded to capabilities that optimize selective and conditional binding, and molecular and biological functions that are related to, but not entirely driven by, binding. These include capabilities such as viral neutralization, receptor mediated internalization and receptor function. In parallel, we have invested in a set of capabilities focused on developability optimization, including models, data and workflows that enable us to generate candidates with drug-like properties by design from the earliest stages of discovery. Because each of these capabilities are embodied in both computational models and experimental protocols, they can often be transferred from one target or modality to another seamlessly and with considerably less effort than starting from scratch. As a result, modules can be combined to address new therapeutic objectives while building on prior learnings and data.

These modular capabilities currently cover three inter-related domains: programmable binding, programmable function and programmable composition and developability.

Programmable Binding: Affinity Optimization

One of our core modules is the ability to improve binding affinity and kinetics, often against challenging epitopes. We applied this module to multiple modalities, including monoclonal antibodies, antibody fragments, peptides, signaling proteins and CARs. In our pipeline, this work underpins, among others, the potential of our high-affinity antibodies in I&I and oncology indications. For example, we have engineered binders with up to 500-fold improvement in binding affinity, while co-optimizing for developability and selectivity across four well established immunology targets: TSLP, IL-13, OX40L and TL1A. This improvement in binding affinity is a key feature designed to enable extended dosing regimens for these immunology product candidates at low doses that we are studying to enable product candidate profiles that include potential for a single injection every six months which is meaningfully superior to typical current regimens for approved biologics.

Programmable Binding: Conditional and Selective Binding

Biological systems are context-dependent. A binder that is useful in one context may be harmful in another. We therefore invest in capabilities that tune when and where binding occurs based on environmental conditions such as pH levels or programmed selectivity to bind one receptor but not a highly similar alternative receptor. Examples include:

- Engineering pH-dependent binding, where an antibody binds tightly at one pH (for example, in the bloodstream) but releases its target at another (for example, in an endosome), which can be useful for reducing target-mediated drug disposition and other therapeutic applications.
- Engineering cross-reactive binders for both human and preclinical species targets, which can simplify translational work, *e.g.*, antigen binder for a T-cell engager, which bind both the human and NHP version of a protein.
- Enhancing selectivity between closely related targets, such as members of a cytokine or G-protein coupled receptor (“GPCR”) family, to reduce off-target effects.

These modules again rely on the deep integration between targeted computational library design, multiplexed experimental assays and, where possible, structural insights from Cryo-EM or other methods.

Programmable De Novo Binder Generation

Since our founding, we have built protein design models that enable (i) optimization of existing binders towards a pre-specified set of properties and (ii) *de novo* binder generation—designing a binder without a starting reference. Importantly, these are not separate systems: the same underlying models can operate in either mode, so improvements driven by additional proprietary data strengthen both *de novo* generation and generative optimization. *De novo* binder design allows us to specify a desired epitope and binding geometry (“pose”) upfront, in contrast with traditional methods that leverage either naïve libraries or immunization-based approaches to produce binders, which then must be screened to identify those that bind the intended epitope and exhibit the desired properties. Because *de novo* design is intent-driven, it enables us to:

- test precise mechanistic hypotheses (*e.g.*, binding a specific epitope to modulate receptor activation);
- pursue difficult or underexplored epitopes (including epitopes that are poorly sampled by immune-derived antibodies); and
- systematically explore epitope and pose space at scale to identify designs that achieve the desired functional outcomes.

We are applying *de novo* approaches to many of our current programs, as well as programs in collaboration with our existing partners.

Programmable Function

Our Generate Platform has been successfully applied to learn the relationship between a protein sequence and its function, rather than binding alone. For example, in receptor biology, simply binding to a receptor is not enough; the downstream signaling pathway a ligand engages can determine whether its effects are therapeutic or harmful.

To date, we have successfully optimized for the following molecular and/or biological function amongst others that can be design features of our candidates:

- **Functional Internalization:** initially for delivery to endosome in the context of a preclinical ADC program.
- **CAR function:** focused on multiple therapeutically relevant parameters such as cell killing and applied in our clinical product candidate, GB-5267.
- **T-cell engager function:** across multiple preclinical T-cell engager binders and antigen binding arms.
- **GPCR function:** focused on antagonism with preliminary preclinical work supporting optimizing for agonism.

This enables us to search for proteins that not only bind to the given target but that also demonstrate bias signaling toward beneficial pathways (for example, promoting anti-inflammatory responses while minimizing pro-inflammatory ones). In all the examples above there was a notable separation between improved affinity and improved function, demonstrating our Generate Platform's ability to optimize outside the context of binding alone. We have applied similar logic to other functional questions across diverse molecular and biological functions.

Programmable Composition

We applied our generative models to combine the composition of different protein components to create a single therapeutic protein candidate. As an example, we successfully grafted a T-cell receptor's binding domain (its complementarity-determining regions or CDRs) into a standard antibody framework – which allowed us to leverage the specificity of T-cell receptors for their target tumor antigen (often a peptide with a single amino acid difference from the healthy protein) with the robust profile of an antibody. The resultant antibodies were able to distinguish a single amino-acid difference between the target mutant peptide, which they bound with high affinity, and the corresponding healthy protein, which they avoided binding even at high concentration, while also exhibiting a robust developability profile.

Programmable composition extends our modular approach by enabling us to assemble multiple validated components into a single therapeutic protein candidate to achieve a desired overall profile. While our programs resulting from these composition applications are at an early preclinical stage, we believe they illustrate the flexibility of our Generate Platform and demonstrate promise for future therapeutics development.

Programmable Developability and Manufacturability

Clinical success will require, among other things, that our proteins are sufficiently manufacturable, stable and suitable for formulation and delivery. We therefore incorporate developability objectives from the start in our generation process, co-optimizing them in parallel with efficacy-related properties. We use a combination of:

- Developability property models trained on internal and historical data that are used directly in design to co-optimize expression, stability, aggregation risk, polyreactivity, viscosity, and related attributes;
- High-throughput developability and biophysical assays that measure these properties at scale; and
- A continual feedback loop in which assay data updates and improves our property models, enabling increasing generalizability across protein modalities.

By co-optimizing developability and activity in the same design–build–test–learn generation cycles, we aim to increase the likelihood that candidates selected for advancement are drug-like by design and to streamline downstream development.

Expanding Set of Modular Capabilities

Our current modules were developed to offer reliable and repeatable capabilities that can be applied to solve many challenges required to engineer a differentiated therapeutic. In this way, a single program may begin with one or more core modules, such as affinity or developability optimization, but as we layer in additional capabilities, such as signaling bias, internalization control or species cross-reactivity, the number of distinct product candidate profiles that can be assembled increases. As our catalog of validated modular capabilities grows, we believe we can mix and match them to address more complex biological questions, exchange one module for an improved version without redesigning an entire program, and transfer successful design strategies from one target class to another.

In practice, this means that each module has the potential to do more than advance a single program. A program that requires, for example, fine-tuned functional bias in a receptor family or highly selective recognition of closely related antigens can leave behind improved modules in those areas, which we believe can then be reused in future programs. Over time, as the number and maturity of these modules increases, our vision is for our Generate Platform to offer an expanding set of highly reliable and rapidly deployable modular capabilities that can be utilized across multiple therapeutic areas and protein modalities. We seek to translate this approach into a steady stream of highly differentiated therapeutic programs, which we can develop for both ourselves and our collaboration partners to broaden the value creation and capture impact of our Generate Platform.

Computational Innovation to Ideate and Design at Scale

Our proprietary computational stack combines generative models that propose protein designs with predictive and decision models that evaluate, prioritize, and iterate toward pre-specified therapeutic objectives. Together, these models enable us to generate large numbers of candidate sequences under explicit constraints and to jointly optimize multiple, sometimes competing, design objectives. In practice, we care not only about whether a protein folds and binds, but also how it signals, whether it is selective, whether it can be manufactured and how it behaves in formulation. Our models are built to reason jointly about attributes such as affinity, function, specificity and developability, rather than optimizing any single metric in isolation. Traditional approaches often need to focus on a single molecular attribute, optimize for that and then move onto the next. In doing so, drug developers often sacrifice one attribute to achieve a goal in another. Our approach is fundamentally different and is designed to allow for co-optimization of multiple attributes simultaneously, meaning we can explicitly manage and reduce tradeoffs relative to the way typically seen in traditional drug discovery methods.

At a high level, our Generate Platform includes (i) generative models that propose new protein sequences; (ii) property predictors that estimate how those designs are likely to behave across a range of assays and (iii) decision and ranking models including models that prioritize designs for experimental testing and help orchestrate the next questions to ask in each generation cycle. The same underlying infrastructure is designed to be generalizable, meaning that it can operate across protein modalities in a consistent way, including protein modalities such as antibodies, multi-specifics, enzymes, hormones, peptides, cell therapies and multi-chain protein assemblies. We have designed protein variants across all of these diverse protein modalities.

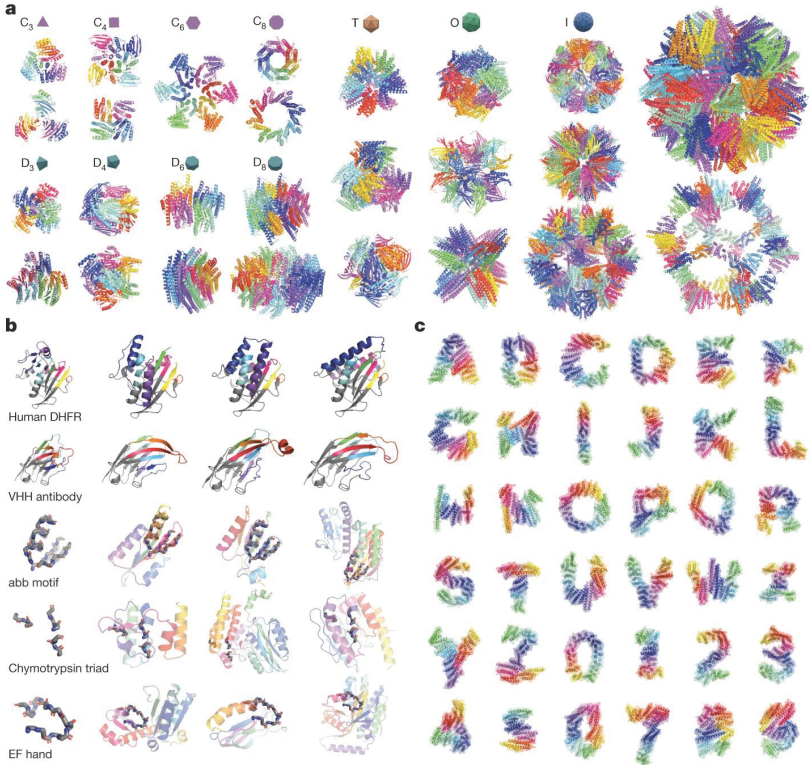
Example Generative Model: The Chroma Model

As an illustrative example of our approach, we previously developed and published the Chroma model, a programmable generative model for protein complexes described in *Nature* in November 2023. The Chroma model is a demonstration of our approach to programmable protein generation; our internal

model development has advanced substantially beyond this public example. The Chroma model learns statistical regularities in protein structures and sequences from public structural databases and then recombines those principles in novel ways to propose designs.

The Chroma model treats protein design as an inference problem: it learns a probability distribution over realistic protein shapes and sequences, and then samples from that distribution under external constraints specified by the scientist. Those constraints can describe, for example, required structural motifs, symmetry groups, overall shape, membership in a particular fold or functional class, or even text-based descriptions provided by other neural networks. In effect, the model separates what it learns about "how proteins are put together" from what we specify about "what we want this protein to do or look like," as illustrated in the figure below.

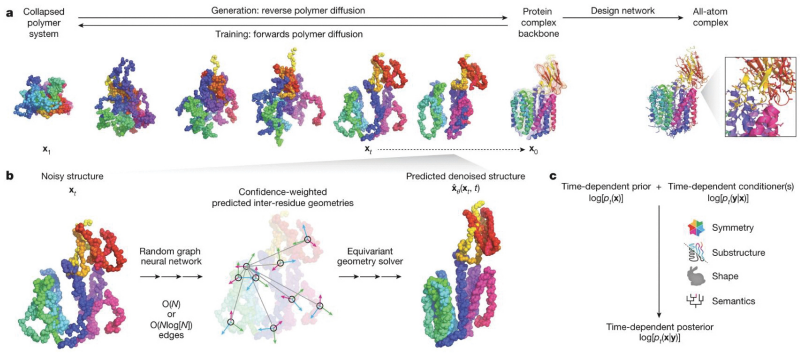
Symmetry, substructure and shape conditioning enable geometric molecular programming.



A. Sampling oligomeric structures with arbitrary chain symmetries is possible by using a conditioner that tessellates an asymmetric subunit in the energy function. Cyclic (Cn), dihedral (Dn), tetrahedral (T), octahedral (O) and icosahedral (I) symmetry groups can produce a wide variety of possible homomeric complexes. The right-most protein complex contains 60 subunits and 60,000 total residues, which is enabled by leveraging symmetries and using our subquadratically scaling architecture. **B.** Conditioning on partial substructure (monochrome) enables protein infilling or outfilling. The top two rows illustrate regeneration (color) of half a protein (the enzyme DHFR, first row) or complementarity-determining region loops of a VHH antibody (second row). The next three rows show conditioning on a predefined motif. The order and matching location of motif segments is not prespecified here. **C.** Conditioning on arbitrary volumetric shapes is exemplified by the complex geometries of the Latin alphabet and Arabic numerals. All structures were selected from protocols with high rates of *in silico* refolding.

The Chroma model incorporated several new machine learning components tailored to molecular systems. It uses a diffusion process over protein backbones that respects the conformational statistics of polymer chains, gradually adding and then removing noise in a way that preserves realistic local geometry. It applies random graph neural networks to reason over many residues at once with computational cost that grows subquadratically in system size, enabling generation of very large proteins and complexes on commodity hardware. Equivariant layers translate predicted pairwise geometries into three dimensional atomic coordinates, and specialized low temperature sampling strategies improve the quality of the final structures drawn from the diffusion process.

The Chroma model is a generative model for proteins and protein complexes that combines structured diffusion for protein backbones with scalable molecular neural networks for backbone synthesis and all-atom design

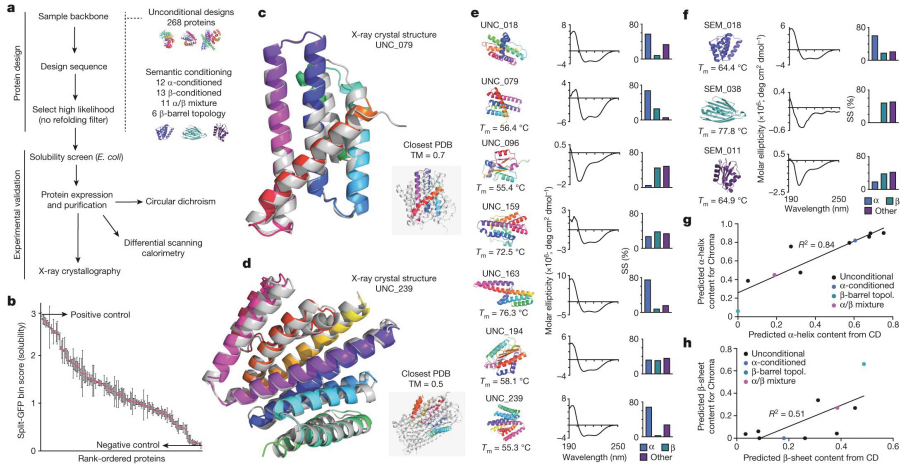


A. A correlated diffusion process with chain and radius-of-gyration constraints gradually transforms protein structures into random collapsed polymers (right to left). The reverse process (left to right) can be expressed in terms of a time-dependent optimal denoiser $\hat{x}_\theta(x_t, t)$ that maps noisy coordinates x_t at time t to predicted denoised coordinates x_0. **B.** We parameterize this in terms of a random graph neural network with long-range connectivity inspired by efficient N-body algorithms (middle) and a fast method for solving for a global consensus structure given predicted inter-residue geometries (right). Another graph-based design network (A, top right) generates protein sequences and side-chain conformations conditionally based on the sampled backbone. **C.** The time-dependent protein prior learnt by the diffusion model can be combined with composable restraints and constraints for the programmable generation of protein systems.

As the Chroma model is a joint model of sequence and structure, a single framework can support multiple tasks. It can sample completely *de novo* proteins with no close natural analogues, generate multichain complexes, redesign or “infill” portions of existing proteins while keeping other regions fixed, and morph between structural configurations. In interactive settings, the Chroma model can be conditioned on symmetry groups, secondary-structure patterns, target shapes (including arbitrary outlines such as letters and numbers) or higher level semantic signals produced by other models, illustrating how high level specifications can be compiled into concrete three dimensional designs.

The Chroma model’s capabilities were tested experimentally at scale. In our published work, we characterized hundreds of designed proteins generated by the model and observed that a substantial fraction expressed, folded and showed favorable biophysical behavior. For selected designs where crystal structures were solved, the experimentally determined backbones closely matched the model’s predictions at near atomic resolution, supporting the view that the Chroma model is capturing meaningful aspects of protein physics rather than memorizing known structures.

Experimental validation of proteins engineered with the Chroma model



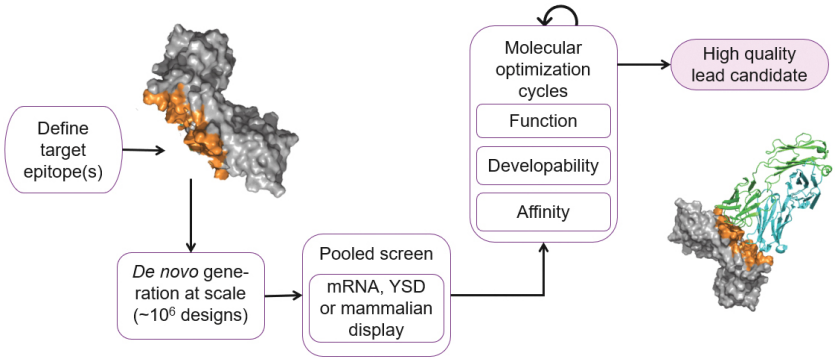
A. Protocol for protein design and experimental validation. Unconditional designs: 268 proteins. Semantic conditioning: 12 α-conditioned, 13 β-conditioned, 11 α/β mixtures and 6 with β-barrel topology. See text for details. **B.** Rank-ordered unconditional Chroma protein solubility scores by the split-GFP assay for 172 tested proteins. Red dots and error bars denote means and standard deviations, respectively, from three biological replicates. c,d, X-ray crystal structures (rainbow) of UNC_079. **C.** 1.1 Å resolution, PDB 8TNM, root-mean-square deviation (RMSD) = 1.1 Å) and UNC_239. **D.** 2.4 Å resolution, PDB 8TNO, RMSD = 1.0 Å) overlaid with Chroma-generated models (grey). Insets compare each crystal structure (rainbow) with its nearest PDB match (4NH2 and 6AFV, respectively; grey). **E.** CD data for seven purified Chroma proteins. The fraction of α-helical and β-strand content was determined using BeStSel50. Tm is the melting temperature determined by differential scanning calorimetry and SS designates secondary structure. **F.** CD data for three purified Chroma conditional designs: SEM_018 (α-conditioned), SEM_038 (β-barrel topology) and SEM_011 (α/β mixture). **G/H.** Correlation between predicted secondary-structure content in Chroma designs compared with the prediction from CD, for α-helical (g) and β-strand (h) content.

We view the Chroma model as a representative example of how we develop and validate our models: combining new architectures and sampling methods, explicit conditioning on design goals and systematic experimental characterization to close the loop between computation and reality — an approach we have continued to build on in subsequent internal model development.

Example Protein Binder Generation

A major objective for the field of protein design has been the ability to design specific *de novo* antibody binders: producing antibodies that bind specified epitopes without starting from existing binders. This capability is central to programmable biology because it enables explicit intent (where to bind and how) to be translated directly into concrete molecular designs. In our approach, we specify an "*in silico* painted" epitope that defines where on the target we want to bind. Our generative models then propose antibody sequences along with their anticipated complex structures engaging the desired epitope, subject to any pre-specified antibody framework constraints and with desired biophysical properties.

Example approach for a *de novo* binder against a single specified epitope

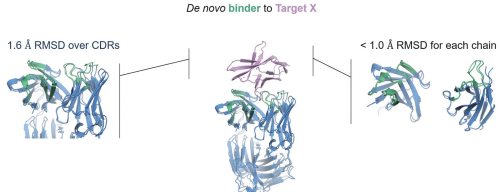


Since our founding, we have focused on developing models that enable the generation of *de novo* binders. We believe that our first successful attempts to generate *de novo* antibody binders to pre-specified, structurally defined epitopes predated published reports of such results by several years. In these early campaigns, we generated specific binders with detectable affinity and measurable function, with no prior knowledge of any antibodies that bound those sites. In this initial work, we often relied on large-scale design sets (on the order of approximately 100,000 designed sequences per campaign) to confidently identify binders and characterize hit rates.

After these initial results, we scaled up to large and systematic studies to understand hit rates and specificities, producing and testing large panels of *de novo* designs across multiple targets and epitopes in the process, with pooled assays and next-generation sequencing used to quantify enrichment for intended targets and to monitor binding to off-targets and control proteins. In so doing, we not only showed the ability to repeatedly generate *de novo* on-target proteins with low levels of non-specific binding and identified regions of design space with favorable hit rates, but we also generated large-scale data that have improved our model performance on *de novo* generation. We have therefore seen substantial advancement in our *de novo* capabilities, having now achieved “plate-scale” *de novo* generation (*i.e.*, ability to identify high-affinity, well-developable binders from a set of approximately 100 tested designs) across modalities, including antibodies and mini-proteins.

We have verified not only affinities, specificities, and other biophysical properties of our *de novo* designs, but we have also validated that they bind the desired epitope and possess the intended structural characteristics, *e.g.*, for one design (shown in the figure below), we confirmed alignment between the design and actual structure within 1.6 angstrom across the paratope. This gave us confidence that our models were able to translate high-level structural constraints into concrete antibody designs.

Structural confirmation of a *de novo* binder with approximately1.6 angstroms RMSD over the CDRs



More recent work has applied these capabilities to targets of direct therapeutic interest. We currently have numerous programs that are capitalizing on these capabilities.

Current Focus: Pushing the Frontier of Protein Generation

We continue to push the frontier of protein generation. This includes our efforts to expand the range of proteins and complexes that our models can perform well on, improve how they capture uncertainty and failure modes and extend conditioning to more complex design goals, such as multi-epitope targeting or finely tuned functional profiles while increasing hit rates across design tasks. While unconditional generation appears to be a more tractable setting, we believe the highest-value frontier is conditioned generation, where increasingly specific constraints can require the model to operate in regions of design space with less prior data and higher uncertainty.

We have built our models and workflows to learn from proprietary functional and structural assay data, and we continue to invest in deepening that integration so that our generative frameworks can operate reliably under richer biological context and more demanding conditioning.

How We Apply Our Models Today

Today, our models are deployed throughout the Generate Platform to support protein design decisions against a defined set of therapeutic targets. In a typical campaign, we begin by specifying a design objective in terms of target binding, molecular function and developability requirements, all either from an existing reference binder or from a *de novo* starting point. Our generative models are then used to propose a large and diverse set of candidate designs that satisfy the scientist's constraints and explore multiple potential solutions to the problem. Property predictors score and rank these designs based on predicted attributes and decision models help select subsets to test within our biohardware solutions.

After multiplexed assays and, where relevant, Cryo-EM or other structural measurements are run, the resulting data are fed back to inform both foundation generative and property models. In subsequent generation cycles, the models increasingly focus on regions of sequence and structure space that appear promising, while still maintaining enough diversity to avoid premature convergence. We use a similar pattern across modalities and targets, adjusting conditioning and objective functions to match the biological question.

We believe this integrated approach – combining a family of protein design algorithms, with experimental feedback supported by agentic systems – allows our Generate Platform to move beyond isolated model runs toward a more systematic, repeatable way of exploring protein design space. As such, each therapeutic pursuit is valuable in and of itself, but importantly it is valuable also in building the stack of information and experience for the Generate Platform in general to enable even better future, broader applications in more reliable ways.

Innovative Biohardware to Build and Measure Proteins at Scale

We believe that realizing intentionality at scale through generative protein design requires scalable verification: both (i) generating data at scale to train and refine our models and (ii) generating data at scale to test model proposals and learn from outcomes in real biological systems. To support this, we built scalable biohardware—integrated physical infrastructure, automation and assay technologies designed to efficiently produce proprietary, therapeutically relevant datasets across sequence, structure, and function. Underlying our data acquisition approach is the belief that data scale improves both model quality and model therapeutic impact. Two technologies that exemplify this are our multiplexed assay systems, which can assay many designs in parallel, and our structural determination technologies, which experimentally elucidate key step between protein sequence and biological action.

Example Multiplexed Data Acquisition: Synergistic Technologies to Maximize the Functional Information from Each Experiment

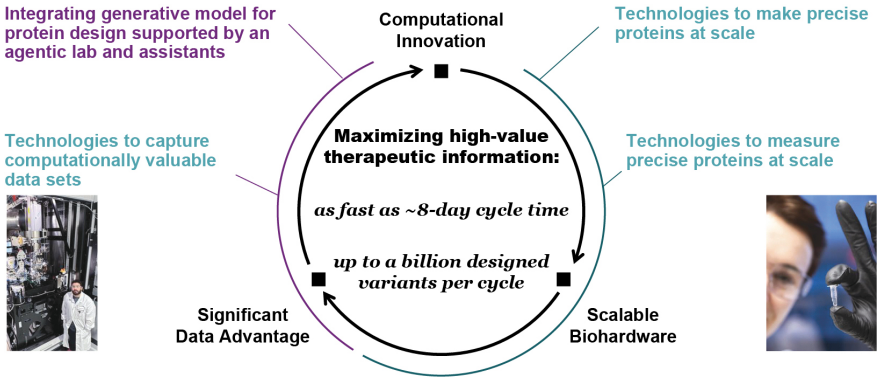
Multiplexed experimentation is focused on testing many designs in parallel in a single system, like a graphics processing unit. Instead of testing one protein at a time, like a central processing unit, we aim to test thousands to millions of related protein designs together, under well-controlled conditions, and to read out their behavior in a way that is compatible with our algorithms. This approach differs from any methods that focus on scaling the number of experiments, such as scaling 96-well plates where every well tests a single design. Rather than primarily scaling the number of discrete experiments (as is often done in precedented industrial approaches), our multiplex systems are designed to increase functional information throughput (*i.e.*, information gained per experiment) and reduce cost per variant, leveraging DNA synthesis, novel pooled cloning, and pooled screening techniques.

We engineer our DNA libraries so that each variant is uniquely barcoded or otherwise traceable, and we design our assays so that each readout can be linked back to a specific variant. As shown in the figure below, examples of multiplexed approaches we use include technologies to:

- assemble DNA to encode therapeutic length proteins
- translate DNA to proteins efficiently including cell free protein expression
- assay proteins at scale including mRNA, Yeast Surface Display ("YSD") or mammalian display

Each of these are performed in a multiplexed fashion vis-à-vis pooled experiments with the data readout de-multiplexed to provide insights on each variant.

Technologies deployed in the Generate Platform



Each of these technologies leverages proprietary DNA assembly and synthesis to create libraries of millions to hundreds of billions of intentionally designed protein sequences at a lower cost, and express them in systems such as cell-free expression systems, and then assay these libraries with high-throughput techniques including next-generation sequencing. As a result, we can implement computational designs as real proteins at an increasingly lower cost per protein. This lowering cost of proposing and verifying protein designs allows us to interrogate large regions of sequence space (either around a single hypothesis/lead protein or explore a multitude of hypotheses in parallel), and increasingly explore more unique areas of a protein to find elusive and productive designs to solve complex molecular challenges.

We believe that this focus on cost per variant, rather than cost per experiment, is a key enabler of our Generate Platform.

Example Structural Data Acquisition: Cryo-EM

Our customized Cryo-EM core is a critical data enabler that allows us to visualize proteins and protein complexes at near-atomic resolution by rapidly freezing them and imaging them with an electron beam. Historically, Cryo-EM has been used primarily as a bespoke, low-throughput tool to solve individual structures of interest, amounting to a relatively small number of structures per year solved primarily within academic settings. We have built our Cryo-EM core with a fundamentally different goal of industrializing and scaling this technique specifically as a data-generation capability.

- We operate four high-end Cryo-EM instruments, along with dedicated sample preparation and data processing infrastructure.
- We have automated large portions of the workflow, from sample grid preparation to image collection and reconstruction, enabling more predictable throughput.

- We design our campaigns to solve structures in batches (plate-scale Cryo-EM), not just single proteins, so that each campaign yields a collection of structures that can be used to train our models.
- We monitor our Cryo-EM core progress in terms of information gain and throughput, using active learning driven by our generative models to suggest the most informative structures to solve next.

This change in mindset—from Cryo-EM as a rare, artisanal measurement to Cryo-EM as a routine, multiplexed input to a learning system—is central to our Generate Platform as it enables us to fill data gaps that are highly valuable in training models but sparsely available in the public domain.

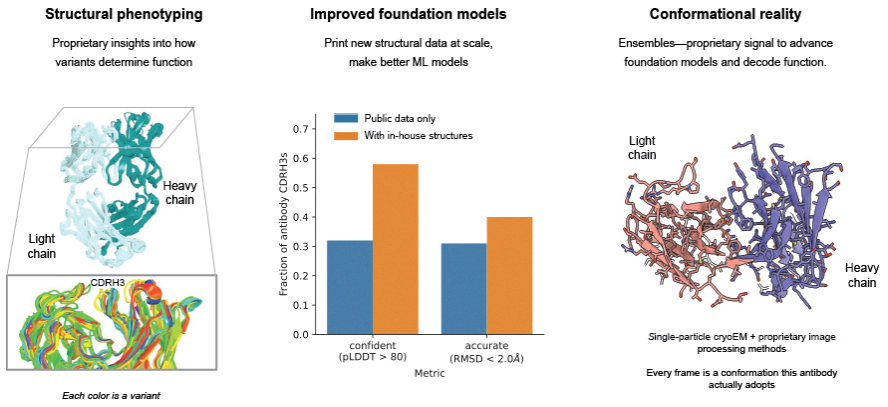
Using Cryo-EM Data as a Learning Signal

High-resolution structural data are particularly valuable for our protein design algorithms. For example, when we know, at atomic or near-atomic resolution, how a binder engages on a target, we can:

- Improve our structure-aware generative models that understand the 3D geometry of binding interfaces (*e.g.*, by including the structure in the training set or via post-training approaches).
- Identify which parts of the protein are most important for binding and which can be modified to improve other properties (*e.g.*, within a therapeutic development program).
- Systematically explore alternative binding modes, epitopes or conformations and measure how each affects function, enabling phenomenological sequence-structure-function models for specific biological scenarios.

We believe these data support both our general protein generation capabilities as well as specific protein design challenges, *e.g.*, a given antibody bound to the TL1A trimer, as well as more complex structural data such as conformational ensembles, which describe the protein structure at the next level of detail relative to the traditional "ground-state" view, which is crucial to understanding biological function. For example, our internally-determined structures have improved our computational model's performance, with as few as 250 in house antibody structures measurably improving model confidence and accuracy in determining the structure of the challenging CDRH3 loop of an antibody, as outlined in the figure below.

Improved computational performance based on proprietary data



Our Integrated Approach Towards Therapeutic Impact and Programmable Biology

The capabilities of our Generate Platform are designed to have measurable impact on the underlying unit economics of drug design in two broad domains: reductions in the time and cost for increasingly mature capabilities to deliver high quality answers, and the ability to deploy these capabilities to challenges that were uneconomical to pursue with higher cost and longer time horizon approaches.

Reduced Time and Cost to High Quality Molecular Designs

We have invested in developing biohardware systems that have the potential to reduce cost and time to generate data for each generation cycle. These include:

- **Library creation at scale.** Using our in-house DNA assembly methods, we generated more than 130,000 DNA sequences encoding a computationally-designed antibody library in approximately two weeks, with all six CDRs designable across more than a hundred thousand sequences.
- **Protein production at scale.** Our cell-free protein synthesis systems can translate on the order of millions of proteins from computationally-designed DNA libraries within one to three days, and can express and purify up to roughly 200,000 proteins in a two-day period for more detailed characterization.
- **Functional readouts at scale.** Droplet-based microfluidic screens enabled us to evaluate more than 10,000 enzyme variants in approximately one hour. Additional multiplexed assays allow tens of thousands to millions of variants to be tested in pooled or arrayed formats across binding and functional readouts. A single experiment can yield tens of thousands to millions of labeled data points, substantially reducing the cost per datapoint relative to traditional one-variant-per-well workflows.
- **Structure determination at scale.** In our TL1A program, after having generated hundreds of variants that engage the target in subtly different ways and measured those functionally and biophysically, we used our Cryo-EM core to solve structures of 50 different variants within 72 hours from samples to deposited models, feeding the resulting insights back into models for improved generation in the next round.

Taken together, these capabilities mean that generation cycles of “design–build–test–learn” that historically might have taken months can now potentially be executed in weeks or, for certain questions, days, while generating systematic datasets that both drive programs toward their objectives and improve our models over time.

This is exemplified by a design campaign where our goal was to take a signaling protein with naturally binds two receptors and design in selectivity for a single receptor. Leveraging a set of experimental tools, our team improved the generation cycle time from four weeks to eight days.

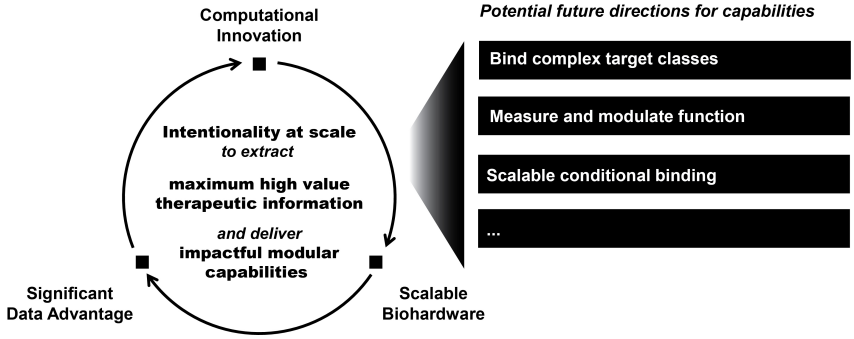
Quality of the Answer

The reduced cost and time for protein design allows us to explore more speculative areas of opportunity and potentially identify rare and more impactful proteins, which may ultimately enable us to answer questions that were traditionally time and cost prohibitive to address.

For example, we selected a historically poor-internalizing tumor-associated antigen and evaluated whether we could apply our internalization capability to meaningfully improve intracellular delivery for an ADC by changing the binding sequence alone. We identified an epitope from a clinical-stage antibody as the starting point and conducted four rounds of structure-guided machine-learning optimization to engineer variants with substantially enhanced trafficking. This effort yielded proteins with upwards of 10-fold higher internalization activity *in vitro* while maintaining affinity comparable to the reference antibody, an important feature to support distribution of the ADC throughout tumors. Importantly, these improvements were achieved without relying on pH-dependent binding or other artificial uptake mechanisms.

We then tested whether these improvements in internalization would translate into a superior *in vivo* profile. Reference ADCs built on the original binders produced only transient tumor-growth delay in xenograft models, underscoring the need for enhanced intracellular delivery. To test whether our optimized internalizing antibodies could overcome this limitation, we conducted an *in vivo* evaluation in a solid tumor xenograft model using both reference antibodies and top Generate Platform-derived variants, each conjugated to the same Dxd-like payload to control for linker-payload effects. Both of our top variants outperformed the conjugated references, exhibiting deeper and more durable tumor growth inhibition.

Future Generate Platform and Application Directions



We are continuing to invest in developing our technologies, across both our algorithms and our biohardware, to reinforce and extend our Generate Platform's capabilities. We will continue directing these efforts toward building capabilities with broad and deep applicability across a variety of hard-to-solve molecular and biological challenges.

Our current focus is on refining and expanding our more complex binding modular capabilities (including conditional and selective binding) and advancing biological functional design for targeted cell-surface receptor families. We intend to translate these modular capabilities into therapeutic programs, applying them, along with many of our existing modular capabilities, to create differentiated molecular profiles and potentially highly differentiated clinical profiles.

Manufacturing and CMC Strategy

We do not own or operate, and currently have no plans to establish, any manufacturing facilities. All of our preclinical and clinical drug supply development, manufacturing, storage, distribution and testing are outsourced to third-party manufacturers and facilities. Our manufacturing strategy enables us to more efficiently direct financial resources to the research, development and commercialization of programs rather than diverting resources to internally develop and maintain manufacturing facilities. As our programs advance through development, we expect to enter into longer-term commercial supply agreements with key suppliers and manufacturers to fulfill and secure our supply needs.

We have developed, or expect to develop, high yield, industry standard drug manufacturing processes suitable for preclinical, clinical and commercial scale manufacturing of our product candidates with our third-party manufacturers. While any reduction or halt in the supply of raw materials, drug substance or drug product could limit our ability to develop our programs until a replacement supplier or contract manufacturer is found and qualified, we believe that we have or will be able to manufacture sufficient clinical supply of GB-0895 and our other product candidates, as well as future pipeline product candidates, to support our planned clinical trials, and have access to sufficient manufacturing capacity to support our planned clinical development pipeline.

Commercialization

Given our stage of development, we have not yet established a commercial organization or distribution capabilities. We plan to independently commercialize our products, if approved, in the U.S. and other regions where we determine it makes commercial sense to do so. At the appropriate time, we will recruit a sales force and a medical affairs team and take other steps to establish the necessary commercial infrastructure. However, as product candidates advance through our pipeline, our plans may change.

Competition

The biopharmaceutical industry is characterized by rapid advancing technologies, intense competition, and a strong emphasis on proprietary and novel products and product candidates. We have invested significant capital, time and technical expertise to create a highly differentiated platform, the Generate Platform, that enables us to generate and experimentally validate therapeutic designs with intent and at scale, and to translate validated capabilities into product candidates, ultimately delivering scalable therapeutic impact. Our ability to remain competitive will depend in part on our ability to continue to improve the Generate Platform and to demonstrate success in our drug design and development efforts, including with respect to GB-0895, GB-4362 and GB-5267.

Our competitors have developed, are developing or may develop product candidates and products competitive with GB-0895, GB-4362, GB-5267 and our other programs and product candidates. GB-0895, GB-4362, GB-5267 and any future product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. Our competitors include larger and better-funded pharmaceutical biotechnological and therapeutics companies. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. Moreover, we may also compete with universities, governmental agencies and other public and private research institutions that may be active in research in our target indications and could be in direct competition with us. We also compete with these organizations to recruit management, scientists and clinical development personnel, and our inability to compete successfully could negatively affect our level of expertise and our ability to execute our business plan. We will also face competition in establishing clinical trial sites and enrolling subjects for clinical trials and in identifying and in-licensing intellectual property related to new product candidates, as well as entering into partnerships, collaborations and license arrangements.

Specifically, there are several companies developing or marketing treatments that may be approved for the same indications and/or use the same mechanism as GB-0895. Over time, I&I markets have developed with a generally increasing number of competitors, improved efficacy and improved dosing intervals (*i.e.*, less frequent dosing). Existing therapeutics for asthma include controller medications, reliever medications and more recently, biologics from Genentech, Inc. and Novartis (Xolair; anti-IgE), Sanofi S.A. ("Sanofi") and Regeneron Pharmaceuticals, Inc. ("Regeneron") (Dupixent; anti IL-4 x IL-13 bispecific), GSK plc ("GSK") (Nucala; anti-IL-5 mAb and depemokimab; anti-IL-5 mAb), AstraZeneca (Fasenra; anti-IL-5Rα mAb), Teva Pharmaceutical Industries Limited ("Teva") (Cinqair; anti IL-5), and Amgen and AstraZeneca (tezepelumab). Of these approved biologics, only one drug targeting the TSLP pathway, tezepelumab, has been approved for the treatment of severe asthma and is the only severe asthma biologic without phenotype or biomarker limitations in its label. However, we believe there is a significant unmet need for biologic solutions that drive higher adherence through improved dosing regimens.

We are aware of multiple long-acting, anti-TSLP product candidates in clinical development for severe asthma. GSK5784283 is a long-acting TSLP candidate currently being evaluated in a Phase 2 trial by GSK and Aiolos Bio. verekitug is a mAb that binds to the TSLP receptor, instead of the ligand like tezepelumab, and is currently being evaluated in a Phase 2 trial by Upstream Bio, Inc. ("Upstream Bio"). APG333 is an extended half-life mAb targeting TSLP that is currently being evaluated in a Phase 1 trial by Apogee Therapeutics, Inc. ("Apogee"). AstraZeneca and Amgen are also developing an inhaled TSLP formulation that is currently in Phase 2 trials.

There are multiple private companies also developing product candidates that may compete with GB-0895 in the future. Solrikitug is a mAb targeting TSLP being developed by Uniquity Bio ("Uniquity"), while WIN378 is a long-acting TSLP being developed by Windward Bio ("Windward"), which is in-licensed from Kelun Biotech and Harbour BioMed. We also expect potential competition from assets currently being developed in China such as Aclaris Therapeutics and Biosion's BSI-045B, and KeyMed's CM326 and Staidson Biopharmaceuticals' STSA-1201.

In addition to monotherapy approaches, we are aware of multiple product candidates evaluating TSLP in combination with other targeted therapies including Sanofi's lunsekimig (anti IL-13 x TSLP bispecific), Pfizer's tilrekimig (anti IL-13 x TSLP x IL-4 trispecific), Teva and Biolojic Design's BD9 (anti IL-13 x TSLP bispecific), Roche Holding AG's QX031N (anti IL-33 x TSLP bispecific), Innovent's IBI-3002 (anti-IL-4Rα x TSLP bispecific) and Belenos Biosciences Inc. and Keymed Biosciences Inc.'s BEL512 (anti IL-13 x TSLP bispecific). We also may seek to evaluate GB-0895 in combination with other targeted therapies such as IL-13 and OX40 ligand in the future.

There are several approved products for COPD including inhaled corticosteroids and bronchodilator inhalers. However, there are only two biologics, Dupixent and Nucala, that have been approved for the treatment of COPD and each has only gained approval in the last two years. We are aware of anti-TSLP product candidates in clinical development for COPD, most prominently tezepelumab, which is currently being evaluated in a Phase 3 trial by both Amgen and AstraZeneca. Earlier-stage product candidates include APG333 being evaluated in a Phase 1 trial by Apogee, verekitug being evaluated in a Phase 2b trial by Upstream Bio, and solrikitug being evaluated in a Phase 2 trial by Uniquity. In addition, there is a broad landscape of targeted biologic approaches currently in development for COPD.

We are unaware of any competing clinical product candidates to GB-4362 that are targeting free MMAE as an adjunctive therapy to ADCs armed with an MMAE payload. There are early-stage clinical candidates and products in development using the MUC16 target in solid tumors, leveraging a variety of modalities. Of those, we believe Regeneron has MUC16-targeted bispecific T-cell engagers and a CAR-T product candidate. We believe there are other competitors that are in preclinical to early clinical phases of development.

If our product candidates do not offer advantages over available products, we may not be able to successfully compete against current and future competitors. The key factors affecting the success of our products, if approved, are likely to be their potential efficacy, safety, convenience and availability of reimbursement.

Intellectual Property

We strive to protect and enhance the proprietary technology, inventions and improvements that are commercially important to the development of our business, including seeking, maintaining and defending patent rights, whether developed internally or licensed from third-parties. We may also rely on trademarks, copyrights and trade secrets relating to our proprietary technologies and on know-how, continuing technological innovation and in-licensing opportunities to develop, strengthen and maintain our proprietary and intellectual property position. We additionally may rely on regulatory and other protections afforded through data exclusivity, market exclusivity and patent term extensions, where available.

Our commercial success depends in part upon our ability to obtain and maintain patent and other proprietary protection for commercially important technologies, inventions, trade secrets, and know-how related to our business, defend and enforce our intellectual property rights, particularly our patent rights, preserve the confidentiality of our trade secrets and know-how, and operate without infringing valid and enforceable intellectual property rights of others. A discussion of risks relating to intellectual property is provided under the section titled "*Risk Factors—Risks Related to Our Intellectual Property*."

The patent positions for biotechnology and pharmaceutical companies like us are generally uncertain and can involve complex legal, scientific and factual issues. In addition, the coverage claimed in a patent application can be significantly reduced before a patent is issued, and its scope can be reinterpreted and even challenged after issuance. As a result, we cannot guarantee that any of our product candidates will be protectable or remain protected by enforceable patents. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection from competitors. Any patents that we hold may be challenged, circumvented or invalidated by third-parties.

As of December 15, 2025, Generate owns 25 active patent families and has exclusively in-licensed 20 active patent families from Flagship Pioneering Innovations VI, LLC ("Flagship"), an affiliate of Flagship Pioneering. These patent families relate to various aspects of our Generate Platform and molecules that we have developed using our Generate Platform.

With respect to our GB-0895 program, we have exclusively in-licensed from Flagship four patent families directed to antibodies that target TSLP and associated compositions and methods. The first patent family is directed to compositions of matter and methods of treatment, including treatment of severe asthma and COPD with GB-0895. As of December 15, 2025, the first family includes one granted U.S. patent and patent applications currently pending in the United States, Australia, Canada, China, the European Patent Office, Israel, Japan, Hong Kong, Republic of Korea, Singapore, and Taiwan. These patents and pending applications, if issued, would be expected to expire in 2043, excluding any patent term adjustments or extensions that may be available and assuming payment of appropriate maintenance, renewal, annuity and other governmental fees. The second patent family is directed to GB-0895 dosing regimens and, as of December 15, 2025, includes one pending international ("PCT") application. Should any patents issue in this family, they would be expected to expire in 2045, excluding any patent term adjustments or extensions that may be available and assuming payment of appropriate

maintenance, renewal, annuity and other governmental fees. The third patent family is directed to compositions comprising antibodies targeting TSLP and IL-13 (including GB-0895 and GB-7624, respectively) and associated compositions and methods. As of December 15, 2025, this third family includes two pending U.S. provisional applications, and should any patents issue from applications claiming priority to these provisional patent applications, they would be expected to expire in 2046, excluding any patent term adjustments or extensions that may be available and assuming payment of appropriate maintenance, renewal, annuity and other governmental fees. The fourth patent family is directed to bispecific antibodies targeting TSLP and IL-13 (including bispecific antibodies with arms comprising sequences corresponding to those of GB-0895 and GB-7624, respectively) and associated methods. As of December 15, 2025, this fourth family includes two pending U.S. provisional applications, and should any patents issue from applications claiming priority to these provisional patent applications, they would be expected to expire in 2046, excluding any patent term adjustments or extensions that may be available and assuming payment of appropriate maintenance, renewal, annuity and other governmental fees.

With respect to our GB-7624 program, in addition to the TSLP and IL-13 combination and bispecific patent families in-licensed from Flagship that are described above, we own two patent families directed to antibodies that target IL-13 and associated compositions and methods. The first patent family is directed to compositions of matter and methods of treatment with IL-13 antibodies, including GB-7624. As of December 15, 2025, the first family includes two pending PCT applications and patent applications currently pending in the United States and Taiwan. Should any patents issue from the patent applications in this family, they would be expected to expire in 2045, excluding any patent term adjustments or extensions that may be available and assuming payment of appropriate maintenance, renewal, annuity and other governmental fees. The second patent family is directed to GB-7624 dosing regimens and, as of December 15, 2025, includes two pending U.S. provisional applications. Should any patents issue from applications claiming priority to these provisional patent applications, they would be expected to expire in 2046, excluding any patent term adjustments or extensions that may be available and assuming payment of appropriate maintenance, renewal, annuity and other governmental fees.

With respect to our GB-4362 program, we own two patent families directed to antibodies that target free MMAE and associated compositions and methods. The first patent family is directed to compositions of matter and methods of treatment with antibodies that target free MMAE, including GB-4362. As of December 15, 2025, this family includes one pending PCT application and one application currently pending in the United States. Should any patents issue from the patent applications in this family, they would be expected to expire in 2045, excluding any patent term adjustments or extensions that may be available and assuming payment of appropriate maintenance, renewal, annuity and other governmental fees. The second family is directed to GB-4362 dosing regimens, and as of December 15, 2025, includes one pending provisional application. Should any patents issue from applications claiming priority to this provisional patent application, they would be expected to expire in 2046, excluding any patent term adjustments or extensions that may be available and assuming payment of appropriate maintenance, renewal, annuity and other governmental fees.

With respect to our GB-5267 program, we own one patent family directed to antibodies that target MUC-16 and associated compositions and methods, including CAR-T compositions. As of December 15, 2025, this family includes three pending U.S. provisional applications. Should any patents issue from applications claiming priority to these provisional patent applications in this family, they would be expected to expire in 2046, excluding any patent term adjustments or extensions that may be available and assuming payment of appropriate maintenance, renewal, annuity and other governmental fees.

We have a broad intellectual property estate directed to key aspects of our Generate Platform that is intended to provide multiple layers of protection. We own three patent families and have exclusively in-licensed eight patent families from Flagship directed to various aspects of our machine learning platform, including programmable, AI-supported drug design and optimization using our proprietary generative algorithms. These families encompass one issued U.S. patent; six patents issued in China, India, Israel and Japan; 10 non-provisional patent applications pending in the U.S.; 31 patent applications pending in Canada, China, European Patent Office, Hong Kong, India, Israel, Japan and Republic of Korea; and two pending PCT applications. These patents and patent applications, if issued, are expected to expire between 2040 and 2044, in each case excluding any patent term adjustments or extensions that may be available and assuming payment of appropriate maintenance, renewal, annuity and other governmental fees. In addition, we own one pending U.S. application, four pending PCT applications and one pending U.S. provisional application directed to technology related to our wet lab platform, including proprietary compositions, devices, assays and other methods which facilitate and support our high-throughput experimentation capabilities. Should any patents issue from patent applications claiming priority to these PCT applications they would be expected to expire between 2044 and 2046, in each case excluding any

patent term adjustments or extensions that may be available and assuming payment of appropriate maintenance, renewal, annuity and other governmental fees.

The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the earliest date of filing a non-provisional patent application.

In the United States, the term of a patent covering an FDA-approved drug may be eligible for a patent term extension under the Hatch-Waxman Act as compensation for the loss of patent term during the FDA regulatory review process. The period of extension may be up to five years beyond the expiration of the patent, but cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval. Only one patent among those eligible for an extension may be extended, and a given patent may only be extended once. Similar provisions are available in Europe and in certain other jurisdictions to extend the term of a patent that covers an approved drug. If our product candidates receive FDA approval, we intend to apply for patent term extensions, if available, to extend the term of patents that cover the approved product candidates. We also intend to seek patent term extensions in any jurisdictions where they are available, however, there is no guarantee that the applicable authorities, including the FDA, will agree with our assessment of whether such extensions should be granted, and even if granted, the length of such extensions.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. The relevant patent laws and their interpretation outside of the United States is also uncertain. Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our technology or product candidates and could affect the value of such intellectual property. In particular, our ability to stop third-parties from making, using, selling, offering to sell or importing products that infringe our intellectual property will depend in part on our success in obtaining and enforcing patent claims that cover our technology, inventions and improvements. We cannot guarantee that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications we may file in the future, nor can we be sure that any patents that may be granted to us in the future will be commercially useful in protecting our product candidates or products, the methods of use or manufacture of those product candidates or products. Moreover, issued patents do not guarantee the right to practice our technology in relation to the commercialization of our products. Issued patents only allow us to block potential competitors from practicing the claimed inventions of the issued patents.

Further, patents and other intellectual property rights in the pharmaceutical and biotechnology space are evolving and involve many risks and uncertainties. For example, third-parties may have blocking patents that could be used to prevent us from commercializing our product candidates and practicing our proprietary technology. Our issued patents may be challenged, invalidated or circumvented, which could limit our ability to stop competitors from marketing related products or could limit the term of patent protection that otherwise may exist for our product candidates. In addition, the scope of the rights granted under any issued patents may not provide us with protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies or products that are outside the scope of the rights granted under any issued patents. For these reasons, we may face competition with respect to our proprietary technology, product candidates or products. Moreover, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any particular product candidate can be commercialized, any patent protection for such product may expire or remain in force for only a short period following commercialization, thereby reducing the commercial advantage the patent provides.

In addition to patent protection, we also rely on know-how and trade secret protection for our proprietary information to develop and maintain our proprietary position. However, trade secrets and know-how can be difficult to protect. Although we take steps to protect our proprietary information, including restricting access to our premises and our confidential information, as well as entering into agreements with our employees, consultants, advisors and potential collaborators, third-parties may independently develop the same or similar proprietary information or may otherwise gain access to our proprietary information. As a result, we may be unable to meaningfully protect our know-how, trade secrets, and other proprietary information.

In addition, we plan to rely on regulatory protection based on data exclusivities and market exclusivities. See “*Business—Government Regulation*” for additional information.

Further, we have and will continue to pursue trademark protection for our company name and brand. As of December 15, 2025, we own three registered trademarks in the United States; six pending trademark applications in the United States; 38 registered trademarks in foreign jurisdictions including Argentina, Australia, Canada, China, European Union, Hong Kong, Japan, Mexico, Norway, Singapore,

Switzerland and the United Kingdom; and 11 pending trademark applications in foreign jurisdictions including Australia, Brazil, Canada, India, Israel, Republic of Korea and Singapore.

License and Collaboration Agreements

Collaboration and License Agreement with Amgen

On December 24, 2021, we entered into a Collaboration and License Agreement, as amended by the First Amendment dated October 5, 2022 and the Second Amendment dated December 12, 2023 (as amended from time to time, the "Amgen Collaboration Agreement") with Amgen to identify biologic proteins and antibodies directed against specified targets. The collaboration initially covered five collaboration targets. Under the Amgen Collaboration Agreement, each of the collaboration programs is to be conducted under research plans with defined research terms. In addition, Amgen has the option to nominate up to five additional collaboration targets, at additional cost, the first of which was exercised in December 2023 related to the sixth target.

Under the Amgen Collaboration Agreement, each party is allocated certain research activities set forth in the research plans for the programs; however, we have primary responsibility. We must use commercially reasonable efforts to conduct research activities assigned to us under the applicable research plan. Amgen is also responsible for conducting the research assigned to it under the applicable research plans for the collaboration programs. Each party will conduct any research program activities allocated to it under the research plans at its own cost, except for certain additional research activities requested by Amgen for which Amgen will reimburse us. Amgen granted to us a non-exclusive license under certain Amgen intellectual property relating to or arising from the collaboration programs to conduct our research activities and other obligations under the Amgen Collaboration Agreement, along with a limited right to conduct certain research and development activities for our Generate Platform, and we granted to Amgen a non-exclusive, fully paid-up, royalty-free, non-sublicensable research license under certain of our intellectual property relating to or arising from the collaboration to conduct its research activities and perform its obligations under the Amgen Collaboration Agreement, on a target-by-target basis. We further granted Amgen an exclusive, worldwide, royalty-bearing, sublicensable license under certain of intellectual property relating to or arising from the collaboration to research, develop, manufacture, commercialize and otherwise exploit collaboration proteins and licensed products, on a target-by-target basis. After lead candidate selection for a collaboration target, Amgen has the sole right and responsibility to develop, manufacture and commercialize licensed products, including the obligation to use commercially reasonable efforts to develop, seek marketing approval for, and commercialize at least one licensed product per collaboration target.

On a collaboration target-by-collaboration target basis, during specified exclusivity periods and provided that Amgen is using commercially reasonable efforts to develop and commercialize a collaboration protein or licensed product for such collaboration target, we agreed not to research, develop, manufacture, commercialize or otherwise exploit competing products with certain specified criteria against the collaboration targets, or enable any third-party to do so, subject to specified exceptions. We have also granted Amgen a right of first negotiation in the event we seek to license rights to research, develop, manufacture or commercialize products comprising antibodies or biological proteins directed to a certain collaboration program target to third-parties.

As consideration for the collaboration, we received a $50.0 million upfront payment from Amgen. Additionally, the Amgen Collaboration Agreement contemplated an investment by Amgen of $25.0 million in equity, at the offering price, if we consummated certain future equity offerings. Amgen purchased 2,109,704 shares of our Series C preferred stock for $25.0 million on May 9, 2023. In connection with the Second Amendment, which added an additional collaboration target, we received an additional payment of $5.0 million. We are eligible to receive up to $370.0 million for each program upon the achievement of certain performance-based milestones, including $160.0 million in development and regulatory milestones and $210.0 million in commercial milestones per program. To date, we have received $5.0 million in milestone payments. No other milestones have been achieved to date. Amgen is also obligated to pay, on a licensed product-by-licensed product and on a country-by-country basis, tiered royalties ranging from a mid-single digit up to a low double-digit percentage on worldwide net sales of any licensed product, subject to customary reductions and offsets. The royalty term will commence on the first commercial sale of a licensed product in a country until the latest of: (a) the tenth anniversary of the date of such first commercial sale of such licensed product in such country; (b) expiration of the last to expire valid claim within the relevant licensed or jointly-owned patents covering such licensed product in such country; (c) expiration of the last-to-expire valid claim within certain specified Amgen patent rights; and (d) expiration of regulatory exclusivity period for such licensed product in such country.

Unless earlier terminated, the Amgen Collaboration Agreement will continue on a licensed product-by-licensed product and country-by-country basis until all payment obligations expire. Upon expiry of the royalty term for a licensed product in a country, Amgen's license becomes fully paid-up for that product in that country. Amgen may terminate the Amgen Collaboration Agreement for convenience upon 30 days' prior written notice, in whole or per target. Each party has customary termination rights under the Amgen Collaboration Agreement, including for the other party's uncured material breach subject to specified cure periods or insolvency. We may also terminate the Amgen Collaboration Agreement in the event that Amgen directly or indirectly challenges in a legal or administrative proceeding the enforceability or validity of our licensed patents, subject to certain exceptions.

Collaboration and License Agreement with Novartis

On September 19, 2024, we entered into a Collaboration and License Agreement (the "Novartis Collaboration Agreement"), with Novartis, to discover, develop, manufacture and commercialize protein therapeutics using our Generate Platform The collaboration covers multiple collaboration targets, conducted under applicable research plans during defined research terms.

Under the Novartis Collaboration Agreement, each party is allocated certain research activities set forth in the research plans for the programs; however, we have primary responsibility. We must use commercially reasonable efforts in conducting the research activities assigned to us under the applicable research plan. Novartis is also responsible for conducting any research activities assigned to it under the applicable research plan. Each party will conduct any research program activities allocated to it under the research plans at its own cost. Novartis granted to us: (i) a non-exclusive research license under certain Novartis intellectual property solely to the extent necessary to conduct our research activities under the research plans and (ii) a non-exclusive, worldwide, fully paid-up and royalty free, perpetual, irrevocable, sublicensable license under certain Novartis know-how utilized or generated in the performance of a research plan and incorporated into our Generate Platform solely to develop, train, validate, test, improve, use and exploit the Generate Platform. We granted to Novartis: (i) a non-exclusive research license under certain of our intellectual property relating to or arising from the research programs to conduct its research activities; (ii) on a licensed program-by-licensed program basis, (a) an exclusive, worldwide, royalty-bearing, sublicensable license under our interest in certain jointly owned collaboration intellectual property and (b) a non-exclusive, sublicensable license under certain of our intellectual property relating to or arising from the licensed programs, in each case ((a)-(b)) to research, develop, manufacture, commercialize and otherwise exploit licensed compounds and licensed products directed against the collaboration target for such licensed program; and (iii) a non-exclusive, worldwide, fully paid-up and royalty free, perpetual, irrevocable, sublicensable (through multiple tiers) license under our solely owned collaboration intellectual property to practice Novartis's background intellectual property or any improvement, derivation, enhancement or other modification thereof. During specified exclusivity periods for each collaboration target, we will not research, develop, manufacture, commercialize or otherwise exploit certain products that compete against the collaboration targets, or enable any third-party to do so, subject to specified exceptions.

Following the research term for a licensed program, Novartis may elect to designate a licensed compound in such licensed program as candidate for further development, and Novartis will have the sole right and responsibility to develop, manufacture and commercialize licensed compounds and licensed products under such licensed program. For each licensed program, Novartis is obligated to use commercially reasonable efforts to develop and seek regulatory approval for at least one licensed product under such licensed program in the United States and at least three of five specified major European markets once a development candidate is declared.

As consideration for the collaboration, we received from Novartis a $50.0 million upfront payment. Novartis also purchased 1,265,822 shares of our Series C preferred stock for $15.0 million. We are eligible to receive up to $1.0 billion across all programs upon the achievement of certain performance-based milestones, including $130.0 million in development and regulatory milestones and $210.0 million in commercial milestones per research program. None of such milestones have been achieved to date. Novartis is also obligated to pay, on a licensed product-by-licensed product and on a country-by-country basis, tiered royalties ranging from a mid-single digit to a low double-digit percentage on worldwide net sales of any licensed product, subject to specified reductions and offsets. The royalty term will commence on the first commercial sale of a licensed product in a country until the latest of: (a) the tenth anniversary of the date of such first commercial sale of such licensed product in such country; (b) expiration of the last to expire valid claim of within certain jointly and Novartis owned patent rights covering such licensed product in such country; and (c) the expiration of the last regulatory exclusivity period for such licensed product in such country.

Unless earlier terminated, the Novartis Collaboration Agreement will continue on a licensed product-by-licensed product and country-by-country basis until expiry of the royalty term for all licensed products worldwide. Upon expiry of the royalty term for a licensed product in a country, Novartis's license becomes fully paid-up and sublicensable for that licensed product in that country. Novartis may terminate the Novartis Collaboration Agreement for convenience upon 90 days' prior written notice in whole, per program or per country. Each party may terminate the Novartis Collaboration Agreement for the other party's uncured material breach, subject to specified notice and cure periods, or insolvency. We may terminate a licensed program after a development candidate declaration if Novartis ceases all bona fide research and development and commercialization for 12 consecutive months, subject to certain exceptions and cure periods.

License Agreement with Flagship

On August 30, 2021, we entered into an agreement (the "Flagship Agreement"), with Flagship, pursuant to which we (i) irrevocably and unconditionally assigned to Flagship all of our right, title and interest in and to certain foundational patent rights conceived prior to our launch, which is defined as the closing of our Series B financing, and our improvements to such patent rights that cannot be practiced without infringing the foregoing patent rights (such patent rights and improvements, the "Foundational IP"), and (ii) obtained an exclusive, worldwide, royalty-bearing, sublicensable, transferable license from Flagship under such Foundational IP to develop, manufacture and commercialize any product or process or component thereof in the licensed field of human therapeutics and vaccines that would, absent the license granted to us by Flagship, infringe at least one valid claim of the Foundational IP. Flagship retained a non-exclusive, worldwide, royalty-free, fully paid, sublicensable license to practice the Foundational IP within the licensed field (i) for non-commercial research and development purposes and (ii) to perform its duties under that certain managerial agreement between us and Flagship Pioneering, dated August 20, 2018 (the "Flagship Managerial Agreement"). In addition, Flagship irrevocably and unconditionally assigned to us all of its right, title and interest in and to any and all patent rights claiming any inventions conceived (i) solely by Flagship Management, or jointly by Flagship Pioneering and us, (ii) after our launch, and (iii) as a result of activities conducted pursuant to the Flagship Managerial Agreement, or other participation of Flagship Pioneering in our affairs, but excluding, in each case, patents that constitute Foundational IP. We utilize the rights granted to us by Flagship Pioneering under the Flagship Agreement in connection with certain aspects of the Generate Platform and GB-0895.

Pursuant to the Flagship Agreement, we are obligated to use commercially reasonable efforts to diligently exploit licensed products in the licensed field and maintain such efforts at all times during the term of the Flagship Agreement, including by spending at least $1.0 million each year on development and commercialization activities with respect to licensed products during the term of the Flagship Agreement and at least $10.0 million on such activities within the first five years of the term, or August 30, 2026. We are also obligated to pay Flagship, on a licensed product-by-licensed product and jurisdiction-by-jurisdiction basis, royalties equal to a low single-digit percentage on net sales of licensed products by us or our subsidiaries or sublicensees. The royalty term will commence on the first commercial sale of such licensed product in such jurisdiction until the expiration of the last valid claim of any Foundational IP covering such licensed product in such jurisdiction. To date, there have been no amounts paid or received by us under the Flagship Agreement.

Unless terminated earlier, the Flagship Agreement will expire on a licensed product-by-licensed product and jurisdiction-by-jurisdiction basis upon the expiration of the last-to-expire royalty term for such licensed product in such jurisdiction. Upon expiration of the royalty term with respect to a licensed product in any jurisdiction and payment in full of all amounts owed by us under the Flagship Agreement for such licensed product in such jurisdiction, the license granted to us will automatically convert into a non-exclusive, fully paid up license for such licensed product in such jurisdiction. We have the right to terminate the Flagship Agreement in its entirety for convenience upon 60 days' prior written notice to Flagship. Either party may terminate the Flagship Agreement upon a material breach by the other party that is not cured within 30 days after receiving written notice of such breach. Flagship may terminate the Flagship Agreement (i) upon 30 days' written notice if we cease to carry on our business with respect to the rights granted in the Flagship Agreement, (ii) upon written notice if we experience an event of bankruptcy or insolvency, or (iii) immediately upon written notice if we or our subsidiaries or sublicensees (provided that we do not timely terminate such sublicensee) challenge the validity, patentability, or enforceability of any Foundational IP or participate in any such challenge, subject to certain exceptions. The royalty term will commence on the first commercial sale of such licensed product in such jurisdiction (provided that we do not timely terminate such sublicensee) challenge the validity, patentability, or enforceability of any Foundational IP or participate in any such challenge, subject to certain exceptions. Flagship may also terminate the license granted to us under the Flagship Agreement with respect to the exploitation of licensed products in a specific sub-field within the licensed field if Flagship determines in its reasonable discretion that we have not used commercially reasonable efforts to develop or commercialize licensed products in such sub-field, subject to our right to retain the license if Flagship approves, and we

carry out to Flagship's satisfaction, a written plan for development and commercialization of a licensed product within such sub-field.

Collaboration Agreement with PMCo

On June 22, 2023, we entered into a collaboration agreement (the "PMCo Agreement"), with PMCo, an affiliate of Flagship Pioneering, pursuant to which the parties agreed to collaborate on research and development activities with respect to the licensed products containing certain antibodies against TSLP and/or IL-4Rα and share research and development costs, with us bearing 65% and PMCo bearing 35% of all fully-burdened research costs and development expenses, which percentage commitments are subject to adjustment. On January , 2026, we entered into an amended and restated collaboration agreement with PMCo, pursuant to which .

Government Regulation

Regulation of Biological Products in the United States

In the United States, the FDA regulates biological products under the Federal Food, Drug, and Cosmetic Act ("FDCA"), the Public Health Service Act ("PHSA"), and their implementing regulations. Biological products are also subject to other federal, state and local statutes and regulations. An applicant seeking approval to market and distribute a new biological product in the United States generally must satisfactorily complete each of the following steps:

- preclinical laboratory tests, animal studies and formulation studies, with certain studies performed in accordance with the FDA's Good Laboratory Practices ("GLP") regulations, as applicable;
- manufacturing of the product candidate that the sponsor intends to use in human clinical trials along with required analytical and stability testing;
- submission to the FDA of an Investigational New Drug application ("IND") for human clinical testing, which must become effective before human clinical trials may begin;
- approval by an independent institutional review board ("IRB") representing each clinical trial site before a clinical trial may be initiated at each site;
- performance of adequate and well-controlled human clinical trials in accordance with current Good Clinical Practices ("GCP") and any additional nonclinical studies required to establish the safety and effectiveness of the product candidate for each proposed indication;
- preparation and submission to the FDA of a biologics license application ("BLA"), as applicable, requesting approval to market the product candidate for one or more proposed indications, including submission of detailed information on the manufacture and composition of the product and proposed labeling;
- a determination by the FDA within 60 days of its receipt of a BLA to file the application for review;
- satisfactory completion of an FDA advisory committee review, if applicable;
- satisfactory completion of one or more FDA inspections of the manufacturing facility or facilities, including those of third-parties, at which the product and/or components thereof, are produced to assess compliance with cGMP and to assure that the facilities, methods and controls are adequate to preserve the product's identity, strength, quality and purity;
- satisfactory completion of any FDA audits of the preclinical studies and clinical trial sites to assure compliance with GLP, as applicable, and GCP, and the integrity of clinical data in support of the BLA;

- payment of user fees under the Prescription Drug User Fee Act ("PDUFA"), unless exempted;
- obtaining FDA approval, or licensure, of the BLA; and
- compliance with any post-approval requirements, including the potential requirement to implement a Risk Evaluation and Mitigation Strategy ("REMS") and any post-approval studies or other post-marketing commitments required by the FDA.

The failure to comply with the applicable U.S. requirements at any time during the product development process, including preclinical testing, clinical testing, and the approval process, or the post-approval process, may subject an applicant to delays in development, regulatory review or approval and/or administrative or judicial sanctions. These sanctions may include, but are not limited to, the FDA's refusal to allow an applicant to proceed with clinical testing, refusal to approve pending applications, license suspension or revocation, withdrawal of an approval, issuance of warning or untitled letters, adverse publicity, product recalls, marketing restrictions, product seizures, import detentions and refusals, total or partial suspension of production or distribution, injunctions, fines and civil or criminal investigations and penalties brought by the FDA or the Department of Justice ("DOJ"), and other governmental entities, including state agencies.

Preclinical Studies and INDs

Before testing any product candidate in humans, the product candidate must undergo preclinical testing. Preclinical tests include laboratory evaluations of product chemistry, formulation and stability, as well as studies to evaluate the potential for efficacy and toxicity in animal studies. The conduct of certain preclinical tests and formulation of the compounds for testing must comply with federal regulations and requirements. The results of the preclinical tests, together with manufacturing information, analytical data, and plans for the proposed clinical studies, are submitted to the FDA as part of an IND application. An IND is a request for authorization from the FDA to administer an investigational product to humans. An IND will also include a clinical trial protocol detailing, among other things, the objectives of the clinical trial, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated, if the trial includes an efficacy evaluation. Some preclinical testing may continue after an IND is submitted.

An IND automatically becomes effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions about the product candidate or conduct of the proposed clinical trial, including concerns that human research subjects will be exposed to unreasonable health risks, and places the clinical trial on a partial or complete clinical hold. In that case, the IND sponsor and the FDA must resolve the clinical hold issues before the clinical trials can begin.

Clinical holds also may be imposed by the FDA after clinical trials have begun, including if there is concern for patient safety, as a result of new data, findings, or developments in clinical, preclinical and/or chemistry, manufacturing and controls, or where there is non-compliance with regulatory requirements. A separate submission to an existing IND must be made for each successive clinical trial conducted during development, and the FDA reviews such submissions before each clinical trial can begin.

Human Clinical Trials in Support of a BLA

Clinical trials involve the administration of the investigational product candidate to healthy volunteers or patients with the disease or condition to be treated under the supervision of qualified investigators in accordance with GCP requirements. Clinical trials are conducted under protocols detailing, among other things, the objectives of the trial, dosing procedures, inclusion and exclusion criteria, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. A protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND. Clinical testing also must satisfy extensive GCP rules and the requirements for informed consent.

A sponsor who wishes to conduct a clinical trial outside the United States may, but need not, obtain FDA authorization to conduct the clinical trial under an IND. When a foreign clinical trial is conducted under an IND, all FDA IND requirements must be met unless waived. The FDA will accept a well-designed and well-conducted foreign clinical trial not conducted under an IND if the trial was conducted in accordance with GCP requirements, and the FDA is able to validate the data through an onsite inspection if deemed necessary. The GCP requirements encompass both ethical and data integrity standards for clinical trials. The FDA's regulations are intended to help ensure the protection of human subjects enrolled in non-IND foreign clinical trials, as well as the quality and integrity of the resulting data.

Further, each clinical trial must be reviewed and approved by an IRB or ethics committee either centrally or individually at each institution at which the clinical trial will be conducted. The IRB or ethics

committee will consider, among other things, clinical trial design, patient informed consent, ethical factors, the safety of human subjects and the possible liability of the institution. The FDA, IRB, or ethics committee, or the clinical trial sponsor may suspend or discontinue a clinical trial at any time for various reasons, including a finding that the clinical trial is not being conducted in accordance with GCP requirements or that the participants are being exposed to an unacceptable health risk.

Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board ("DSMB"), or data monitoring committee ("DMC"). This group may recommend continuation of the trial as planned, changes in trial conduct, or cessation of the trial at designated check points based on certain available data from the trial to which only the DSMB/DMC has access.

Clinical trials typically are conducted in three sequential phases, but the phases may overlap or be combined. Additional studies may be required after approval.

- Phase 1 clinical trials are initially conducted in a limited population of healthy subjects or patients to test the product candidate for safety, dose tolerance, absorption, metabolism, distribution, excretion and pharmacodynamics.
- Phase 2 clinical trials are generally conducted in a limited patient population to identify possible adverse effects and safety risks, evaluate the efficacy of the product candidate for specific targeted indications and determine optimal dosage. Multiple Phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more costly Phase 3 clinical trials.
- Phase 3 clinical trials typically proceed if one or more Phase 2 clinical trials demonstrate that a dose range of the product candidate is potentially effective and has an acceptable safety profile. Phase 3 clinical trials are generally undertaken within an expanded patient population to provide substantial evidence of clinical efficacy or purity and potency and further test for safety in an expanded and diverse patient population at multiple, geographically dispersed clinical trial sites to provide a basis for physician labeling and for submitting a BLA to seek regulatory approval for a biological product.

In some cases, the FDA may approve a BLA but require the sponsor to conduct additional clinical trials to further assess the product's safety and effectiveness after approval. Such post-approval trials are typically referred to as Phase 4 clinical trials. These studies are used to gain additional experience from the treatment of patients in the approved indication and, where applicable, to confirm a clinical benefit for products approved under accelerated approval. The failure to exercise due diligence with regard to conducting Phase 4 clinical trials could result in withdrawal of approval of the applicable product.

Information about applicable clinical trials must be submitted within specific timeframes to the National Institutes of Health ("NIH") for public dissemination on its ClinicalTrials.gov website. Information related to the product, patient population, phase of investigation, study sites and investigators and other aspects of the clinical trial is made public as part of the registration of the clinical trial. Although sponsors are obligated to disclose the results of their clinical trials after completion, disclosure of the results can be delayed in some cases for up to two years after the date of completion of the trial. Failure to timely register a covered clinical trial or to submit trial results as provided for in the law can give rise to civil monetary penalties and also prevent the non-compliant party from receiving future grant funds from the federal government.

Progress reports detailing the results of the clinical trials, among other information, must be submitted at least annually to the FDA and written IND safety reports must be submitted to the FDA and the investigators for serious and unexpected suspected adverse events, findings from other studies or animal or *in vitro* testing that suggest a significant risk for human subjects and any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must submit an IND safety report within 15 calendar days after the sponsor determines that the information qualifies for reporting. The sponsor also must notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction within seven calendar days after the sponsor's initial receipt of the information.

Under the Pediatric Research Equity Act, a BLA or supplement thereto must contain data that are adequate to assess the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDCA requires that a sponsor who is planning to submit a marketing application for a product that includes a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration submit an initial Pediatric Study Plan ("PSP")

within 60 days of an end-of-phase 2 meeting or as may be agreed between the sponsor and FDA. Those plans must contain an outline of the proposed pediatric study or studies the applicant plans to conduct, including study objectives and design, any deferral or waiver requests and other information required by regulation. The sponsor and the FDA must reach agreement on the PSP. The FDA or the sponsor may request an amendment to the plan at any time.

The FDA may, on its own initiative or at the request of the sponsor, grant deferrals for submission of some or all pediatric data until after approval of the product for use in adults, or full or partial waivers from the pediatric data requirements. Unless otherwise required by regulation, the pediatric data requirements do not apply to products with orphan designation.

Compliance with cGMP Requirements

Concurrent with clinical trials, companies must finalize a process for manufacturing the product candidate in commercial quantities in accordance with cGMP requirements. To help reduce the risk of introduction of adventitious agents with the use of biological products, the PHSA emphasizes the importance of manufacturing controls. The manufacturing process must be capable of consistently producing quality batches of the product and, among other things, companies must develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life. Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications.

Manufacturers and distributors of biological products must also register their establishments with the FDA and certain state agencies. Both domestic and foreign manufacturing establishments must register and provide certain information to the FDA. Establishments may be subject to periodic unannounced inspections by government authorities to ensure compliance with cGMPs and other laws. Noncompliance with such requirements can lead to adverse findings by the FDA during these inspections; in instances of significant or continued noncompliance, such adverse findings can serve as the basis for additional regulatory action by the FDA, including but not limited to warning letters, recalls, seizure, consent decrees, fines, and/or criminal penalties.

Review and Approval of a BLA

The results of product candidate development, preclinical testing and clinical trials, including negative or ambiguous results as well as positive findings, are submitted to the FDA as part of a BLA requesting approval to market the product for one or more specified indications. The BLA must contain extensive manufacturing information and detailed information on the composition of the product and proposed labeling as well as payment of a user fee. Under federal law, the submissions of most BLAs are subject to an application user fee. The sponsor of an approved BLA is also subject to an annual program fee. Certain exceptions and waivers are available for some of these fees, such as an exception from the application fee for products with orphan designation and a waiver for certain small businesses.

The FDA has 60 days after submission of the application to conduct an initial review to determine whether to accept it for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. If the submission has been accepted for filing, the FDA begins an in-depth review of the application. Under the goals and policies agreed to by the FDA under PDUFA, the FDA has ten months in which to complete its initial review of a standard application and respond to the applicant, and six months for a priority review of the application. The FDA does not always meet its PDUFA goal dates for standard and priority BLAs. The review process may be significantly extended by FDA requests for additional information or clarification. The review process and the PDUFA goal date may be extended by three months if the FDA requests or if the applicant otherwise provides additional or clarifying information within the last three months before the PDUFA goal date.

The FDA reviews a BLA to determine, among other things, whether the product is safe, pure and potent for its intended use and whether the facility in which it is manufactured, processed, packaged or held meets standards designed to assure the product's continued safety, quality and purity.

The FDA may refer an application for a novel biologic to an advisory committee. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and may provide a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

On the basis of the FDA's evaluation of the application and accompanying information, including the results of the inspection of the manufacturing facilities and any FDA audits of preclinical and clinical trial sites to assure compliance with GCPs, the FDA may issue an approval letter or a complete response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. If the application is not approved, the FDA will issue a complete response letter, which will contain the conditions that must be met in order to secure final approval of the application, and when possible, will outline recommended actions the sponsor might take to obtain approval of the application. The complete response letter may require additional clinical data and/or other significant and time-consuming requirements related to clinical trials, preclinical studies or manufacturing. Sponsors that receive a complete response letter may submit to the FDA information that represents a complete response to the deficiencies identified by the FDA. The FDA will then re-review the application, taking into consideration the response, and determine whether the application meets the criteria for approval. The FDA will not approve an application until issues identified in any complete response letters have been addressed. Even if such data and information are submitted, the FDA may decide that the application does not satisfy the criteria for approval. Failure to respond to a complete response letter may be considered by the FDA as a request to withdraw the application.

Even if the FDA approves a new product, the approval may be limited to specific disease states, patient populations and dosages, and the indications for use may otherwise be limited. The FDA may also require that contraindications, warnings, or precautions be included in the product labeling. In addition, the FDA may require post-approval studies, including phase 4 clinical trials, to further assess the product's efficacy and/or safety after approval. The agency may also require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution restrictions or other risk management mechanisms, including a REMS, to help ensure that the benefits of the product outweigh the potential risks. A REMS can include medication guides, communication plans for healthcare professionals and elements to assure safe use ("ETASU"). ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, dispensing only under certain circumstances, special monitoring and the use of patent registries. The FDA may prevent or limit further marketing of a product based on the results of post-market studies or surveillance programs. After

approval, many types of changes to the approved product, such as adding new indications, certain manufacturing changes and additional labeling claims, are subject to further testing requirements and FDA review and approval.

Fast Track, Breakthrough Therapy and Priority Review Designations

FDA provides programs intended to facilitate and expedite development and review of new products that are intended to address an unmet medical need in the treatment of a serious or life-threatening disease or condition. These programs include fast track designation, breakthrough therapy designation and priority review designation. These designations are not mutually exclusive, and a product candidate may qualify for one or more of these programs. While these programs are intended to expedite product development and approval, they do not alter the standards for FDA approval. Even if a product candidate qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

The FDA may designate a product for fast track designation if it is intended, whether alone or in combination with one or more other products, for the treatment of a serious or life-threatening disease or condition, and it demonstrates the potential to address unmet medical needs for such a disease or condition. For products with fast track designation, sponsors may have more frequent interactions with the FDA, the product is potentially eligible for accelerated approval and priority review, if relevant criteria are met, and the FDA may initiate review of sections of a product's application before the application is submitted in full. The sponsor must provide, and the FDA must approve, a schedule for this type of "rolling review" process and the sponsor must pay applicable user fees; however, the FDA's review goal for a fast track application does not begin until the last section of the application is submitted. In addition, fast track designation may be withdrawn by the FDA if the FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

A product may be designated as a breakthrough therapy if it is intended, either alone or in combination with one or more other products, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints. The FDA may take certain actions with respect to breakthrough therapies, including holding meetings with the sponsor throughout the development process; providing timely advice to the product sponsor regarding development and approval; involving more senior staff managers in the review process; assigning a cross-disciplinary lead for the review team; and taking other steps to facilitate efficient clinical trial design. Breakthrough therapy designation may be rescinded if a product no longer meets the qualifying criteria.

The FDA may designate a product for priority review if it is a product that treats a serious condition and, if approved, would provide a significant improvement in safety or effectiveness over available therapies. Significant improvement may be illustrated by evidence of increased effectiveness in the treatment of a condition, elimination or substantial reduction of a treatment-limiting adverse reaction, documented enhancement of patient compliance that may lead to improvement in serious outcomes, or evidence of safety and effectiveness in a new subpopulation. A priority review designation is intended to direct overall attention and resources to the evaluation of such applications, and to shorten the FDA's goal for taking action on a marketing application from ten months to six months. Priority review designation may be rescinded if a product no longer meets the qualifying criteria.

Accelerated Approval Pathway

The FDA may grant accelerated approval to a product for a serious or life-threatening condition that provides meaningful therapeutic advantage to patients over existing treatments based upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit. For the purposes of accelerated approval, a surrogate endpoint is a marker, such as a laboratory measurement, radiographic image, physical sign, or other measure that is thought to predict clinical benefit but is not itself a measure of clinical benefit. The FDA may also grant accelerated approval for such a condition when the product has an effect on an intermediate clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality ("IMM"), and that is reasonably likely to predict an effect on IMM or other clinical benefit, taking into account the severity, rarity or prevalence of the condition and the availability or lack of alternative treatments. The FDA has limited experience with accelerated approvals based on intermediate clinical endpoints but has indicated that such endpoints generally may support accelerated approval where the therapeutic effect measured by the endpoint is not itself a clinical benefit and basis for traditional approval, if there is a basis for concluding that the therapeutic effect is reasonably likely to predict the ultimate clinical benefit of a product. Products granted

accelerated approval must meet the same statutory standards for safety and effectiveness as those granted traditional approval.

The accelerated approval pathway is most often used in settings in which the course of a disease is long, and an extended period of time is required to measure the intended clinical benefit of a product, even if the effect on the surrogate or intermediate clinical endpoint occurs rapidly. The accelerated approval pathway is contingent on a sponsor's agreement to conduct, in a diligent manner, post-approval confirmatory studies to verify and describe the product's clinical benefit, and the FDA may require that such confirmatory trials be underway prior to granting accelerated approval. As a result, a product candidate approved on this basis is subject to rigorous post-marketing compliance requirements, including the completion of phase 4 or post-approval clinical trials. Failure to conduct required post-approval studies or confirm a clinical benefit in these studies, dissemination of false or misleading promotional materials, or other compliance concerns may lead the FDA to seek to withdraw accelerated approval on an expedited basis. All promotional materials for products approved under the accelerated approval pathway are subject to prior review by the FDA.

Orphan Drug Designation

Orphan drug designation in the United States is designed to encourage sponsors to develop products intended for treatment of rare diseases or conditions. In the United States, a rare disease or condition is statutorily defined as a condition that affects fewer than 200,000 individuals in the United States or that affects 200,000 or more individuals in the United States and for which there is no reasonable expectation that development and production costs will be recovered from sales of the biological product for the disease or condition in the United States.

Orphan drug designation qualifies a sponsor for tax credits and the product for market exclusivity for seven years following the date of the product's marketing approval if granted by the FDA. An application for designation as an orphan product can be made any time prior to the filing of an application for approval to market the product but must be requested before submitting a BLA. After the FDA grants orphan designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. After FDA grants orphan designation, the product must then go through the same review and approval process as any other product.

A sponsor may request orphan drug designation of a previously unapproved product or a new orphan indication for an already marketed product. In addition, a sponsor of a product that is otherwise the same product as an already approved orphan drug may seek and obtain orphan drug designation for the subsequent product for the same rare disease or condition if it can present a plausible hypothesis that its product may be clinically superior to the first drug. More than one sponsor may receive orphan drug designation for the same product for the same rare disease or condition, but each sponsor seeking orphan drug designation must file a complete request for designation.

If a product with orphan designation receives the first FDA approval for the disease or condition for which it has such designation or for an indication or use within the rare disease or condition for which it was designated, the product generally will receive orphan drug exclusivity. Orphan drug exclusivity means that the FDA may not approve another sponsor's marketing application for the same product for the same indication for seven years, except in certain limited circumstances. If a product designated as an orphan drug ultimately receives marketing approval for an indication broader than what was designated in its orphan drug application, it may not be entitled to exclusivity.

The period of exclusivity begins on the date that the marketing application is approved by the FDA and applies only to the indication for which the product has been designated. The FDA may approve a second application for the same product for a different use or a second application for a clinically superior version of the product for the same use. The FDA cannot, however, approve the same product made by another manufacturer for the same indication during the market exclusivity period unless it has the consent of the sponsor, or if the sponsor is unable to provide sufficient quantities of the orphan drug.

Pediatric Exclusivity

Pediatric exclusivity is another type of non-patent marketing exclusivity in the United States and, if granted, provides for an additional six months of marketing protection that attaches to the term of any existing regulatory exclusivity, including orphan exclusivity. This six-month exclusivity may be granted if a BLA sponsor submits pediatric data that fairly respond to a written request from the FDA for such data. The data do not need to show the product to be safe and effective in the pediatric population studied; rather, if the clinical trial is deemed to fairly respond to the FDA's request, the additional protection is granted and extends whatever statutory or regulatory periods of exclusivity that cover the product by six months provided that at the time pediatric exclusivity is granted there is not less than nine months of term remaining.

U.S. Patent Term Extension

In the United States, a patent claiming a new biological product, its method of use or its method of manufacture may be eligible for a limited patent term extension under the Hatch-Waxman Act, which permits a patent extension of up to five years for patent term lost during product development and FDA regulatory review. The extension period is typically one-half the time between the effective date of the IND and the submission date of the BLA, plus the time between the submission date of the BLA and the ultimate approval date, except that the review period is reduced by any time during which the applicant failed to exercise due diligence. Patent term extension cannot be used to extend the remaining term of a patent past a total of 14 years from the product's approval date in the United States. Only one patent applicable to an approved product is eligible for the extension, and the application for the extension must be submitted prior to the expiration of the patent for which extension is sought. A patent that covers multiple products for which approval is sought can only be extended in connection with one of the approvals. The United States Patent and Trademark Office ("USPTO") reviews and approves the application for any patent term extension in consultation with the FDA.

Biosimilars and Reference Product Exclusivity

The Biologics Price Competition and Innovation Act of 2009 ("BPCIA") established a regulatory framework authorizing the FDA to approve biosimilars and interchangeable biosimilars. A biosimilar is a biological product that is highly similar to an already FDA-licensed biological product, called the "reference product." The FDA has issued multiple guidance documents outlining an approach to review and approval of biosimilars. Under the BPCIA, a manufacturer may submit an application for licensure of a biologic product that is "biosimilar to" or "interchangeable with" a reference product. In order for the FDA to approve a biosimilar product, it must find that there are no clinically meaningful differences between the reference product and proposed biosimilar product in terms of safety, purity and potency. For the FDA to approve a biosimilar product as interchangeable with a reference product, the agency must find that the biosimilar product can be expected to produce the same clinical results as the reference product, and that the biosimilar product and the reference product may be switched without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date of approval of the reference product, and the FDA may not approve a biosimilar product until 12 years from the date on which the reference product was approved. Even if a product is considered to be a reference product eligible for exclusivity, another company could market a competing version of that product if the FDA approves a full BLA for such product containing the sponsor's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of their product. The BPCIA also established an exclusivity period for the first interchangeable biosimilar product to obtain approval. Interchangeable biological products may be substituted by pharmacies for the reference product, subject to state pharmacy law.

Post-Approval Regulation

If regulatory approval for a product or new indication for an existing product is obtained, the sponsor will be required to comply with all applicable post-approval regulatory requirements. The sponsor will be required to report certain adverse reactions and production problems to the FDA, provide updated safety and efficacy information and comply with advertising and promotional labeling requirements and record-keeping requirements. Manufacturers must register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with ongoing regulatory requirements, including cGMP regulations. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and

correction of any deviations from cGMP and impose reporting requirements upon us and any third-party manufacturers that we may decide to use. Accordingly, the sponsor and its third-party manufacturers must continue to expend time, money and effort to maintain compliance with cGMP regulations and other regulatory requirements. There also are continuing, annual program fees for any marketed products.

The FDA may take enforcement action if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown issues with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information, imposition of post-market studies or clinical trials to assess new safety risks, or imposition of distribution or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product;
- fines, warning letters or holds on clinical trials;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product licenses;
- product recall, seizure or detention, or refusal to permit the import or export of products;
- withdrawal of the product from the market and/or withdrawal of approval; or
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product;
- injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates the marketing, labeling, advertising and promotion of biological products including, among other things, standards and regulations for direct-to-consumer advertising, communications regarding unapproved uses, industry-sponsored scientific and educational activities and promotional activities involving the internet and social media. Promotional claims about a product's safety or effectiveness are prohibited before it is approved. After approval, a product generally may be promoted for uses or patient populations consistent with the product's prescribing information. In the United States, healthcare professionals are generally permitted to prescribe products for uses that are not approved by the FDA (sometimes called "off-label use") because the FDA does not regulate the practice of medicine. However, FDA regulations restrict manufacturers' communications about off-label uses. Promotional materials for approved biological products generally must be submitted to the FDA in conjunction with their first use.

If a company, including any representative of the company or anyone speaking on behalf of the company, is found to have promoted off-label uses, the company may become subject to adverse publicity and/or administrative and judicial enforcement by the FDA, the DOJ, or the Office of the Inspector General of the Department of Health and Human Services, as well as state authorities. Such enforcement could subject a company to a range of penalties that could have a significant commercial impact, including civil and criminal fines and agreements that materially restrict the manner in which a company promotes or distributes its products.

Combination Products

The FDA also regulates combination products. Specifically, under regulations issued by the FDA, a combination product may include:

- a product comprised of two or more regulated components that are physically, chemically, or otherwise combined or mixed and produced as a single entity;
- two or more separate products packaged together in a single package or as a unit and composed of drug and device products, device and biological products, biological and drug products or biological products, drug products and device products;

- a drug, or device, or biological product packaged separately that according to its investigational plan or proposed labeling is intended for use only with an individually specified drug, or device, or biological product where both are required to achieve the intended use, indication, or effect and where upon approval of the proposed product, the labeling of the other product would need to be updated (*e.g.*, to reflect a change in intended use, dosage form, strength, route of administration, or significant change in dose); or
- an investigational drug, or device, or biological product packaged separately that according to its proposed labeling is for use only with another individually specified investigational drug, device, or biological product where both are required to achieve the intended use, indication, or effect.

Under the FDCA and its implementing regulations, the FDA is charged with assigning a center with primary jurisdiction, or a lead center, for review of a combination product. The designation of a lead center generally eliminates the need to receive approvals from more than one FDA center for combination products, although it does not preclude consultations by the lead center with another FDA center. The determination of which center will be the lead center is based on the "primary mode of action" of the combination product. The FDA has established an Office of Combination Products to address issues regarding combination products and provide more certainty to the regulatory review process. This office is responsible for developing guidance and regulations to clarify the regulation of combination products, and for assigning the FDA center that will have primary jurisdiction for review of a combination product where the jurisdiction is unclear or in dispute.

Following approval of a combination product, each component of a combination product retains its regulatory status (as a biologic, drug or device, for example) and is generally subject to the requirements established by the FDA for that type of component. In addition, under FDA regulations, combination products are generally subject to the cGMP requirements applicable to each component within the combination.

Data Privacy and Security Laws

In the ordinary course of business, we collect, receive, or otherwise process personal data, including information we may collect about participants in our clinical trials. Accordingly, we are, or may be become, subject to numerous data privacy and security obligations, including global, federal, state, and local laws, regulations, guidance, industry standards, external and internal privacy and security policies, contractual requirements and other obligations related to privacy and data security.

Under the federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), the U.S. Department of Health and Human Services ("HHS"), has issued regulations to protect the privacy and security of protected health information ("PHI"), used or disclosed by covered entities including certain healthcare providers, health plans and healthcare clearinghouses. HIPAA also regulates standardization of data content, codes and formats used in healthcare transactions and standardization of identifiers for health plans and providers. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 ("HITECH"), and their regulations, also imposes certain obligations on the business associates of covered entities and their subcontractors that obtain PHI in providing services to or on behalf of covered entities. In addition to federal privacy regulations, there are a number of state laws governing confidentiality and security of health information that are applicable to our business. In addition to possible federal administrative, civil and criminal penalties for HIPAA violations, state attorneys general are authorized to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorney's fees and costs associated with pursuing federal civil actions. Accordingly, state attorneys general have brought civil actions seeking injunctions and damages resulting from alleged violations of HIPAA's privacy and security rules. New laws and regulations governing privacy and security may be adopted in the future as well.

Additionally, states, such as California, Virginia and Colorado have recently enacted the consumer privacy laws that grant rights to data subjects and place increased privacy and security obligations on entities handling personal data of consumers or households. While we are not currently subject to laws such as the California Consumer Privacy Act ("CCPA"), some observers note that the CCPA and similar legislation could mark the beginning of a trend toward more stringent privacy legislation in the U.S., which could increase our potential liability and adversely affect our business.

Because of the breadth of these laws and the narrowness of the statutory exceptions under such laws, it is possible that some of our current or future business activities, including certain clinical research, sales and marketing practices and the provision of certain items and services to our customers, could be

subject to challenge under one or more of such privacy and data security laws. The heightening compliance environment and the need to build and maintain robust and secure systems to comply with different privacy compliance and/or reporting requirements in multiple jurisdictions could increase the possibility that we may fail to comply fully with one or more of these requirements. If our operations are found to be in violation of any applicable privacy or data security laws or regulations, we may be subject to penalties, including potentially significant criminal, civil and administrative penalties, damages, fines, imprisonment, contractual damages, reputational harm, diminished profits and future earnings, additional reporting requirements and/or oversight if we become subject to a consent decree or similar agreement to resolve allegations of non-compliance with these laws, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. While there are some exemptions for certain data processed in the context of clinical trials, developments in data privacy and security laws may further complicate compliance efforts. The impact these increasingly stringent laws and evolving regulatory frameworks related to personal data processing may have on us is more fully discussed in the section titled "*Risk Factors*" appearing elsewhere in this prospectus.

Additionally, to the extent we collect personal data from individuals outside of the United States, through clinical trials or otherwise, we are, or may become, subject to foreign data privacy and security laws, such as the European Union's General Data Protection Regulation 2016/679 ("EU GDPR") and other national data protection legislation in force in relevant EEA Member States, and the EU GDPR as it forms part UK law by virtue of section 3 of the European Union (Withdrawal) Act 2018 ("UK GDPR"). Foreign privacy and data security laws impose significant and complex compliance obligations on entities that are subject to those laws, as more fully discussed in the section titled "*Risk Factors*" appearing elsewhere in this prospectus.

Regulation and Procedures Governing Approval of Medicinal Products Outside the United States

In order to market any product outside of the United States, a company must also comply with numerous and varying regulatory requirements of other countries and jurisdictions regarding quality, safety and efficacy and governing, among other things, clinical trials, marketing authorization, commercial sales and distribution of products. Whether or not it obtains FDA approval for a product, an applicant will need to obtain the necessary approvals by the comparable foreign regulatory authorities before it can commence clinical trials or marketing of the product in those countries or jurisdictions. For example, the process governing approval of medicinal products in the European Union generally follows the same lines as in the United States. It entails satisfactory completion of preclinical studies and adequate and well-controlled clinical trials to establish the safety and efficacy of the product for each proposed indication. It also requires the submission to the relevant competent authorities of a marketing authorization application ("MAA") and granting of a marketing authorization by these authorities before the product can be marketed and sold in the European Union.

Nonclinical Studies

Nonclinical studies are performed to demonstrate the health or environmental safety of new chemical or biological substances. Certain nonclinical (pharmaco-toxicological) studies must be conducted in compliance with the principles of good laboratory practice ("GLP"), as set forth in EU Directive 2004/10/EC (unless otherwise justified for certain particular medicinal products, *e.g.*, radio-pharmaceutical precursors for radio-labeling purposes), which define a set of rules and criteria for a quality system for the organizational processes and conditions applicable to non-clinical studies. These GLP standards reflect the Organization for Economic Co-operation and Development requirements.

Clinical Trial Approval

The regulatory landscape related to clinical trials in the EU has been subject to recent changes. In April 2014, the European Union adopted the Clinical Trials Regulation (EU) No 536/2014 ("CTR"), which entered into application on January 31, 2022, repealing and replacing the Clinical Trials Directive 2001/20/EC. The CTR is directly applicable in all European Union Member States meaning no national implementing legislation in each European Union Member State is required. The CTR aims at harmonizing and streamlining the approval of clinical trials in the European Union, simplifying adverse-event reporting procedures, improving the supervision of clinical trials and increasing their transparency. Parties conducting certain clinical trials must, as in the United States, post clinical trial information in the European Union on the Clinical Trials Information System ("CTIS"). The CTR transition period ended on

January 31, 2025, and all clinical trials (and related applications) are now fully subject to the provisions of the CTR.

While the EU Clinical Trials Directive required a separate clinical trial authorization application ("CTA"), to be submitted in each EU Member State in which the clinical trial takes place, to both the competent national health authority and an independent ethics committee, much like the FDA and IRB respectively, the CTR introduces a centralized process and only requires the submission of a single application for multi-center trials. The CTR allows sponsors to make a single submission to both the competent authority and an ethics committee in each EU Member State, leading to a single decision per Member State. The CTA must include, among other things, a copy of the trial protocol and an investigational medicinal product dossier containing information about the manufacture and quality of the medicinal product under investigation. The assessment procedure of the CTA has been harmonized as well, including a joint assessment by all EU Member States concerned, and a separate assessment by each EU Member State with respect to specific requirements related to its own territory, including ethics rules. Each EU Member State's decision is communicated to the sponsor via CTIS. Once the CTA is approved, clinical trial development may proceed.

Medicines used in clinical trials must be manufactured in accordance with Good Manufacturing Practice ("GMP"). Other national and EU-wide regulatory requirements may also apply.

PRIME Designation in the European Union

The PRIority MEdicines ("PRIME"), scheme is intended to encourage product development in areas of unmet medical need and provides accelerated assessment under the European Union centralized procedure for marketing authorization of products representing substantial innovation. Eligible products must target conditions for which there is an unmet medical need (there is no satisfactory method of diagnosis, prevention or treatment in the European Union or, if there is, the new medicine will bring a major therapeutic advantage) and they must demonstrate the potential to address the unmet medical need by introducing new methods of therapy or improving existing ones. Products from small- and medium-sized enterprises may qualify for earlier entry into the PRIME scheme than larger companies. Many benefits accrue to sponsors of therapeutic candidates with PRIME designation, including but not limited to early and proactive regulatory dialogue with the European Medicines Agency ("EMA"), frequent discussions on clinical trial designs and other development program elements, and potentially accelerated MAA assessment once a dossier has been submitted. Importantly, a dedicated EMA contact and rapporteur from the Committee for Medicinal Products for Human Use ("CHMP") are appointed early in the PRIME scheme facilitating increased understanding of the product at the EMA's Committee level. A kick-off meeting initiates these relationships and includes a team of multidisciplinary experts at the EMA to provide guidance on the overall development and regulatory strategies. Where, during the course of development, a medicine no longer meets the eligibility criteria, support under the PRIME scheme may be withdrawn.

Marketing Authorization

To obtain a marketing authorization for a product under the European Union regulatory system, an applicant must submit an MAA, either under a centralized procedure administered by the EMA or one of the procedures administered by competent authorities in European Union Member States (decentralized procedure, national procedure, or mutual recognition procedure). A marketing authorization may be granted only to an applicant established in the European Union. Regulation (EC) No 1901/2006 provides that prior to obtaining a marketing authorization in the European Union, an applicant must demonstrate compliance with all measures included in an EMA-approved Pediatric Investigation Plan ("PIP"), covering all subsets of the pediatric population, unless the EMA has granted a product-specific waiver, class waiver or a deferral for one or more of the measures included in the PIP. The Paediatric Committee of the EMA ("PDCO"), may grant deferrals for some medicines, allowing a company to delay development of the medicine for children until there is enough information to demonstrate its effectiveness and safety in adults. The PDCO may also grant waivers when development of a medicine for children is not needed or is not appropriate, such as for diseases that only affect the elderly population. The respective requirements for all marketing authorization procedures are laid down in Regulation (EC) No 1901/2006, the so-called Paediatric Regulation. This requirement also applies when a company wants to add a new indication, pharmaceutical form or route of administration for a medicine that is already authorized. Products that are granted a marketing authorization with the results of the pediatric clinical trials conducted in accordance with the PIP (even where such results are negative) are eligible for six months' supplementary protection certificate extension. In the case of orphan medicinal products, a two-year extension of the orphan market exclusivity may be available. These pediatric rewards are subject to specific conditions and are not automatically available when data in compliance with the PIP are developed and submitted.

The centralized procedure provides for the grant of a single marketing authorization by the European Commission that is valid for all European Union Member States, as well as the countries of the EFTA Pillar of the European Economic Area (Norway, Iceland and Liechtenstein) ("EEA"). Pursuant to Regulation (EC) No. 726/2004, the centralized procedure is compulsory for specific products, including for medicines produced by certain biotechnological processes, products designated as orphan medicinal products, advanced therapy medicinal products (gene-therapy, somatic cell-therapy or tissue-engineered medicines) and products with a new active substance indicated for the treatment of certain diseases, including products for the treatment of cancer, HIV, AIDS, neurodegenerative disorders, diabetes, auto-immune and other immune dysfunctions and viral diseases. The centralized procedure is optional for products containing a new active substance not yet authorized in the European Union, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the European Union. Manufacturers must demonstrate the quality, safety and efficacy of their products to the EMA. The CHMP provides an opinion regarding the MAA. The European Commission grants or refuses a marketing authorization in light of the opinion delivered by the EMA.

Under the centralized procedure, the CHMP is responsible for conducting an initial assessment of a product. The maximum timeframe for the evaluation of an MAA is 210 days, excluding clock stops when additional information or written or oral explanation is to be provided by the applicant in response to questions of the CHMP. Clock stops may extend the timeframe of evaluation of an MAA considerably beyond 210 days. Where the CHMP gives a positive opinion, the EMA provides the opinion together with supporting documentation to the European Commission, who makes the final decision to grant a marketing authorization, which is issued within 67 days of receipt of the EMA's recommendation.

Accelerated evaluation may be granted by the CHMP in exceptional cases, when a medicinal product is of major interest from the point of view of public health and, in particular, from the viewpoint of therapeutic innovation. If the CHMP accepts such a request, the time limit of 210 days will be reduced to 150 days (excluding clock stops), but it is possible that the CHMP may revert to the standard time limit for the centralized procedure if it determines that it is no longer appropriate to conduct an accelerated assessment.

National marketing authorizations, which are issued by the competent authorities of the Member States of the European Union and only cover their respective territory, are available for products not falling within the mandatory scope of the centralized procedure. Where a product has already been authorized for marketing in a Member State of the European Union, this national authorization can be recognized in other Member States through the mutual recognition procedure. If the product has not received a national authorization in any Member State at the time of application, it can be approved simultaneously in various Member States through the decentralized procedure.

Regulatory Data Protection in the European Union

In the European Union, new chemical entities (including both small molecules and biological medicinal products) approved on the basis of a complete and independent data package qualify for eight years of data exclusivity upon marketing authorization and an additional two years of market exclusivity pursuant to Regulation (EC) No 726/2004, as amended, and Directive 2001/83/EC, as amended. Data exclusivity, if granted, prevents generic or biosimilar applicants from referencing the innovator's preclinical and clinical trial data contained in the dossier of the reference product when applying for a generic or biosimilar marketing authorization, for a period of eight years from the date on which the reference product was first authorized in the European Union. During the additional two-year period of market exclusivity, a generic or biosimilar MAA can be submitted, and the innovator's data may be referenced, but no generic or biosimilar medicinal product can be marketed until the expiration of the market exclusivity. The overall ten-year period will be extended to a maximum of eleven years if, during the first eight years of those ten years, the marketing authorization holder obtains a marketing authorization in the European Union for one or more new therapeutic indications which, during the scientific evaluation prior to authorization, are held to bring a significant clinical benefit in comparison with existing therapies. Even if a compound is considered to be a new chemical entity so that the innovator gains the prescribed period of data exclusivity, another company may market another version of the product if such company obtained marketing authorization based on an MAA with a complete and independent data package of pharmaceutical tests, preclinical tests and clinical trials.

Orphan Designation and Exclusivity

Regulation (EC) No 141/2000 and Regulation (EC) No. 847/2000 provide that a product can be designated as an orphan medicinal product by the European Commission if its sponsor can establish that the product is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition, where either (i) such condition affects not more than five in ten thousand persons in the European Union at the time the application is made, or (ii) without incentives it is unlikely that the marketing of the product in the European Union would generate sufficient return to justify the necessary investment in its development. For either of these conditions, the applicant must also demonstrate that there exists no satisfactory method of diagnosis, prevention or treatment of the condition in question that has been authorized in the European Union or, if such a method exists, that the product will be of significant benefit to those affected by that condition.

An orphan designation provides a number of benefits, including fee reductions, regulatory assistance and the possibility to apply for a centralized marketing authorization. Marketing authorization for an orphan product leads to a ten-year period of market exclusivity being granted following marketing approval of the orphan medicinal product. During this market exclusivity period, the EMA, the European Commission or the European Union Member States may only grant a marketing authorization to a "similar medicinal product" for the same therapeutic indication as an authorized orphan product if: (i) a second applicant can establish that its product, although similar to the authorized orphan product, is safer, more effective or otherwise clinically superior; (ii) the marketing authorization holder for the authorized orphan product consents to a second orphan medicinal product application; or (iii) the marketing authorization holder for the authorized orphan product cannot supply sufficient quantities of the orphan medicinal product. A "similar medicinal product" is defined as a medicinal product containing a similar active substance or substances as contained in an authorized orphan medicinal product, and which is intended for the same therapeutic indication. The market exclusivity period for the authorized therapeutic indication may, however, be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan designation, including if the product is considered to be sufficiently profitable so as not to justify market exclusivity. Orphan designation must be requested before submitting an application for marketing authorization. Orphan designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

Patent Term Extensions in the European Union and Other Jurisdictions

The European Union also provides for patent term extension through supplementary protection certificates ("SPCs"). The rules and requirements for obtaining an SPC are similar to those in the United States. An SPC may extend the term of a patent for up to five years after its originally scheduled expiration date and can provide up to a maximum of fifteen years of marketing exclusivity for a product

from the date of its first marketing authorization in the European Union. In certain circumstances, the period of SPC protection may be extended for six additional months if pediatric exclusivity is obtained. Although SPCs are available throughout the European Union, sponsors must apply on a country-by-country basis. Similar patent term extension rights exist in certain other foreign jurisdictions outside the European Union.

Periods of Authorization and Renewals

A marketing authorization is valid for five years, in principle, and it may be renewed indefinitely after five years on the basis of a re-evaluation of the risk-benefit balance by the EMA or by the competent authority of the authorizing EU Member State. To that end, the marketing authorization holder must provide the EMA or the competent authority with a consolidated version of the Common Technical Document in respect of quality, safety and efficacy, including all variations introduced since the marketing authorization was granted, at least nine months before the marketing authorization ceases to be valid. Once renewed, the marketing authorization is valid for an unlimited period, unless the European Commission or the competent authority decides, on justified grounds relating to pharmacovigilance, to proceed with one additional five-year renewal period. Any authorization that is not followed by the placement of the product on the European Union market (in the case of the centralized procedure) or on the market of the authorizing EU Member State (in the case of a national procedure) within three years after authorization, or which is not placed on the market for a consecutive period of three years at any time during its authorization, ceases to be valid.

Regulatory Requirements After Marketing Authorization

Following approval, the holder of the marketing authorization is required to comply with a range of requirements applicable to the manufacturing, marketing, promotion and sale of the medicinal product, and must adhere in strict compliance with the applicable European Union laws, regulations and guidance, including Directive 2001/83/EC, Directive (EU) 2017/1572, Regulation (EC) No 726/2004 and the European Commission Guidelines for Good Manufacturing Practice. These include compliance with the European Union's stringent pharmacovigilance or safety reporting rules. The holder of a marketing authorization must establish and maintain a pharmacovigilance system and appoint a qualified person responsible for pharmacovigilance ("QPPV"), who is responsible for the establishment and maintenance of that system, and oversees the safety profiles of medicinal products and any emerging safety concerns. Key obligations include expedited reporting of suspected serious adverse reactions and submission of periodic safety update reports ("PSURs").

In addition, all new MAAs must include a risk management plan ("RMP"), describing the risk management system that the company will put in place and documenting measures to prevent or minimize the risks associated with the product. The regulatory authorities may also impose specific obligations as a condition of the marketing authorization. Such risk-minimization measures may include post-authorization safety studies and additional monitoring obligations.

In addition, the manufacturing of authorized products, for which a separate manufacturer's license is mandatory, must also be conducted in strict compliance with the EMA's GMP requirements and comparable requirements of other regulatory bodies in the European Union, which mandate the methods, facilities and controls used in manufacturing, processing and packing of products to assure their safety and identity.

The provision of benefits or advantages to physicians to induce or encourage the prescription, recommendation, endorsement, purchase, supply, order or use of medicinal products is prohibited in the European Union. The provision of benefits or advantages to induce or reward improper performance generally is governed by the national anti-bribery laws of European Union Member States and the Bribery Act 2010 in the UK. Infringement of these laws could result in substantial fines and imprisonment. EU Directive 2001/83/EC, which is the EU Directive governing medicinal products for human use, further provides that, where medicinal products are being promoted to persons qualified to prescribe or supply them, no gifts, pecuniary advantages or benefits in kind may be supplied, offered or promised to such persons unless they are inexpensive and relevant to the practice of medicine or pharmacy. This provision has been transposed into the Human Medicines Regulations 2012 and so remains applicable in the UK despite its departure from the European Union.

Payments made to physicians in certain European Union Member States must be publicly disclosed. Moreover, agreements with physicians often must be the subject of prior notification and approval by the physician's employer, his or her competent professional organization and/or the regulatory authorities of the individual European Union Member States. These requirements are provided in the national laws,

industry codes or professional codes of conduct, applicable in the European Union Member States. Failure to comply with these requirements could result in reputational risk, public reprimands, administrative penalties, fines or imprisonment.

The advertising and promotion of medicinal products is also subject to laws concerning promotion of medicinal products, interactions with physicians, misleading and comparative advertising and unfair commercial practices. All advertising and promotional activities for the product must be consistent with the approved summary of product characteristics, and therefore all off-label promotion is prohibited. Direct-to-consumer advertising of prescription medicines is also prohibited in the European Union. Although general requirements for advertising and promotion of medicinal products are established under European Union directives, the details are governed by regulations in each Member State and can differ from one country to another.

The aforementioned European Union rules are applicable in the EFTA Pillar of the EEA (Iceland, Liechtenstein and Norway).

Reform of the Regulatory Framework in the European Union

The European Commission introduced legislative proposals in April 2023 that, if implemented, will replace the current regulatory framework in the European Union for all medicines (including those for rare diseases and for children). In April 2024, the European Parliament adopted its position on the legislative proposals and, in June 2025, the Council of the European Union adopted its position. The European Council, European Parliament and European Commission will enter into trilogue negotiations aimed at reaching a consensus on a final version of the legislation.

Brexit and the Regulatory Framework in the United Kingdom

Following the end of the Brexit transition period on January 1, 2021 and the implementation of the Windsor Framework on January 1, 2025, the UK is not generally subject to EU laws in respect of medicines. The EU laws that have been transposed into UK law through secondary legislation remain applicable in the UK, however, new legislation such as the (EU) CTR is not applicable in the UK.

As of January 1, 2021, the Medicines and Healthcare products Regulatory Agency ("MHRA") is the UK's standalone medicines and medical devices regulator. On January 1, 2025 a new arrangement called the "Windsor Framework" came into effect and reintegrated Northern Ireland under the regulatory authority of the MHRA with respect to medicinal products. The Windsor Framework removes EU licensing processes and EU labeling and serialization requirements in relation to Northern Ireland and introduces a UK-wide licensing process for medicines.

The UK regulatory framework in relation to clinical trials is governed by the Medicines for Human Use (Clinical Trials) Regulations 2004, as amended, which are derived from the CTD, as implemented into UK national law through secondary legislation. In April 2025, the UK introduced the Medicines for Human Use (Clinical Trials) (Amendment) Regulations 2025. The Medicines for Human Use (Clinical Trials) (Amendment) Regulations 2025 will take full effect from April 28, 2026, aims to create a streamlined, risk-proportionate system that accelerates approvals while maintaining robust safety standards. In addition, in October 2023, the MHRA announced a new Notification Scheme for clinical trials which enables a more streamlined and risk-proportionate approach to initial clinical trial applications for Phase 4 and low-risk Phase 3 clinical trial applications.

Marketing authorizations in the UK are governed by the Human Medicines Regulations (SI 2012/1916), as amended. In order to use the centralized procedure to obtain a marketing authorization that will be valid throughout the EEA, companies must be established in the EEA. Therefore, after Brexit, companies established in the UK can no longer use the EU centralized procedure and instead an EEA entity must hold any centralized marketing authorizations. In order to obtain a UK marketing authorization to commercialize products in the UK, an applicant must follow one of the UK national authorization procedures or one of the remaining post-Brexit international cooperation procedures. The MHRA has introduced changes to national licensing procedures, including procedures to prioritize access to new medicines that will benefit patients, a 150-day assessment (subject to clock-stops) and a rolling review procedure. In addition, since January 1, 2024, the MHRA introduced the International Recognition Procedure, or IRP, which enables the MHRA when reviewing certain types of MAAs to take into account the expertise and decision-making of trusted regulatory partners (***e.g.***, the medicines regulatory authorities in Australia, Canada, Switzerland, Singapore, Japan, the U.S.A. and the European

Commission in the EU). The MHRA will conduct a targeted assessment of IRP applications but retain the authority to reject applications if the evidence provided is considered insufficiently robust.

In the UK, the initial duration of a marketing authorization is five years and following renewal will be valid for an unlimited period unless the MHRA decides on justified grounds relating to pharmacovigilance to proceed with only one additional five-year renewal. Any authorization which is not followed by the actual placing of the medicine on the market in the UK within three years shall cease to be in force.

There is no pre-marketing authorization orphan designation in the UK. Instead, the MHRA reviews applications for orphan designation in parallel to the corresponding MAA. The criteria are essentially the same as in the EU, but have been tailored for the market, *i.e.*, the prevalence of the condition in the UK, rather than the EU, must not be more than five in 10,000. Should an orphan designation be granted, the period or market exclusivity will be set from the date of first approval of the product in the UK.

Coverage and Reimbursement

In the United States and markets in other countries, patients generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Adequate coverage and reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors is critical to new product acceptance. Our ability to successfully commercialize GB-0895, GB-4362, GB-5267 and any potential future product candidates will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels.

There is also significant uncertainty related to the insurance coverage and reimbursement of newly approved products and coverage may be more limited than the purposes for which the medicine is approved by the FDA or comparable foreign regulatory authorities. In the United States, the Medicare and Medicaid programs increasingly are used as models for how private payors and other governmental payors develop their coverage and reimbursement policies for drugs.

Factors payors consider in determining reimbursement are based on whether the product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

In the United States, no uniform policy of coverage and reimbursement for drug products exists among third-party payors. Therefore, coverage and reimbursement for drug products can differ significantly from payor to payor. The process for determining whether a third-party payor will provide coverage for a product may be separate from the process for setting the price or reimbursement rate that the payor will pay for the product once coverage is approved. A third-party payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Therefore, even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a return on our investment. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage and reimbursement for the product, and the level of coverage and reimbursement can differ significantly from payor to payor.

Third-party payors are increasingly challenging the prices charged, examining the medical necessity, and reviewing the cost- effectiveness of medical products and services and imposing controls to manage costs.

Further, net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently

restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that reimbursement will be available for any product candidate that we commercialize and, if reimbursement is available, the level of reimbursement. In addition, many pharmaceutical manufacturers must calculate and report certain price reporting metrics to the government, such as average sales price ("ASP") and best price. Penalties may apply in some cases when such metrics are not submitted accurately and timely. Further, these prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit a company's revenue generated from the sale of any approved products.

In some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the European Union provides options for its Member States to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost effectiveness of a particular product candidate to currently available therapies. A Member State may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for GB-0895, GB-4362, GB-5267 and any potential future product candidates. Historically, products launched in the European Union do not follow price structures of the U.S. and generally prices tend to be significantly lower.

Other Healthcare Laws

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business that may constrain the financial arrangements and relationships through which we research, as well as sell, market and distribute any products for which we obtain marketing authorization. Such laws include, without limitation:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, the purchase, lease, order, arrangement, or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs. A person or entity does not need to have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it to have committed a violation;
- the federal civil and criminal false claims laws, such as the federal False Claims Act, which impose criminal and civil penalties and authorize civil whistleblower or qui tam actions, against individuals or entities for, among other things: knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent; knowingly making, using or causing to be made or used, a false statement of record material to a false or fraudulent claim or obligation to pay or transmit money or property to the federal government or knowingly concealing or knowingly and improperly avoiding or decreasing an obligation to pay money to the federal government. Manufacturers can be held liable under the federal False Claims Act even when they do not submit claims directly to government payors if they are deemed to "cause" the submission of false or fraudulent claims. The federal False Claims Act also permits a private individual acting as a "whistleblower" to bring actions on behalf of the federal government alleging violations of the federal False Claims Act and to share in any monetary recovery. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act;
- HIPAA, which created new federal criminal statutes that prohibit a person from knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (*e.g.*, public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false, fictitious, or fraudulent statements or representations in connection with the delivery of, or

payment for, healthcare benefits, items or services relating to healthcare matters; similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;

- the U.S. Physician Payments Sunshine Act and its implementing regulations, which requires certain manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid, or the Children's Health Insurance Program, with specific exceptions, to report annually to CMS information related to certain payments and other transfers of value to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), certain other licensed health care practitioners and teaching hospitals, as well as ownership and investment interests held by the physicians described above and their immediate family members;
- federal government price reporting laws, which require us to calculate and report complex pricing metrics in an accurate and timely manner to government programs; and
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm customers.

Additionally, we are subject to state and foreign equivalents of each of the healthcare laws and regulations described above, among others, some of which may be broader in scope and may apply regardless of the payor. Many U.S. states have adopted laws similar to the federal Anti-Kickback Statute and False Claims Act, and may apply to our business practices, including, but not limited to, research, distribution, sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental payors, including private insurers. In addition, some states have passed laws that require pharmaceutical companies to comply with the Office of Inspector General Compliance Program Guidance for Pharmaceutical Manufacturers and/or the Pharmaceutical Research and Manufacturers of America's Code on Interactions with Healthcare Professionals. Several states also impose other marketing restrictions or require pharmaceutical companies to make marketing or price disclosures to the state and require the registration of pharmaceutical sales representatives. There are ambiguities as to what is required to comply with these state requirements and if we fail to comply with an applicable state law requirement we could be subject to penalties.

Federal, state, and foreign enforcement bodies are continuing to increase their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions, and settlements in the healthcare industry. Violation of any of such laws or any other governmental regulations that apply can result in significant penalties, including, without limitation, administrative, civil and criminal penalties, damages, fines, disgorgement, contractual damages, the curtailment or restructuring of operations, integrity oversight and reporting obligations, exclusion from participation in federal and state healthcare programs, reputational harm, diminished profits and future earnings and individual imprisonment.

Healthcare Reform

Payors, whether domestic or foreign, or governmental or private, are developing increasingly sophisticated methods of controlling healthcare costs and those methods are not always specifically adapted for new technologies such as gene therapy and therapies addressing rare diseases such as those we are developing. In both the United States and certain foreign jurisdictions, there have been a number of legislative and regulatory changes to the health care system that could impact our ability to sell our products profitably.

For example, in the United States, in 2010 the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (collectively, the "ACA"), was enacted, which, among other things, subjected biologic products to potential competition by lower-cost biosimilars; increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program; extended the Medicaid Drug Rebate program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations; subjected manufacturers to new annual fees and taxes for certain branded prescription drugs and provided incentives to programs that increase the federal government's comparative effectiveness research.

Other legislative changes have been proposed and adopted in the United States since the ACA was enacted:

- The Budget Control Act of 2011 and subsequence legislation, among other things, created measures for spending reductions by Congress that include aggregate reductions of Medicare payments to providers, which remain in effect through 2032 unless Congress takes additional action. The U.S. American Taxpayer Relief Act of 2012 further reduced Medicare payments to

several types of providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

- The American Rescue Plan Act of 2021 eliminated the statutory Medicaid drug rebate cap, previously set at 100% of a drug's average manufacturer price, for single source and innovator multiple source drugs, effective January 1, 2024.
- Due to the Statutory Pay-As-You-Go Act of 2010, estimated budget deficit increases resulting from the American Rescue Plan Act of 2021, and subsequent legislation, Medicare payments to providers were further reduced starting in 2025.
- The Inflation Reduction Act of 2022 (the "IRA") includes several provisions that may impact our business, depending on how various aspects of the IRA are implemented. Provisions that may impact our business include a $2,000 out-of-pocket cap for Medicare Part D beneficiaries, the imposition of new manufacturer financial liability on most drugs in Medicare Part D, permitting the U.S. government to negotiate Medicare Part B and Part D pricing for certain high-cost drugs and biologics without generic or biosimilar competition, requiring companies to pay rebates to Medicare for drug prices that increase faster than inflation. Further, under the IRA, orphan drugs are exempted from the Medicare drug price negotiation program if they have one or more orphan designations and are only approved for rare disease indications; otherwise, it may not qualify for the orphan drug exemption. The implementation of the IRA is currently subject to ongoing litigation challenging the constitutionality of the IRA's Medicare drug price negotiation program. The effects of the IRA on our business and the healthcare industry in general is not yet known.
- On July 4, 2025, President Trump signed the One Big Beautiful Bill Act, which imposes significant reductions in the funding of the Medicaid program. Such reductions are expected to decrease the numbers of persons enrolled in Medicaid and reduce the services covered by Medicaid.

These laws and regulations may result in additional reductions in Medicare and other healthcare funding and otherwise affect the prices we may obtain for GB-0895, GB-4362, GB-5267 and any potential future product candidates for which we may obtain regulatory approval or the frequency with which GB-0895, GB-4362, GB-5267 or any potential future product candidates is prescribed or used.

Additionally, there has been increasing legislative and enforcement interest in the U.S. with respect to drug pricing practices. Specifically, there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several U.S. Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, and review the relationship between pricing and manufacturer patient programs.

In addition, the Trump administration is pursuing a two-fold strategy to reduce drug costs in the U.S. While it is unclear whether and how the Trump proposals will be implemented, the Trump policies are likely to have a negative impact on the pharmaceutical industry and on our ability to receive adequate revenues for product candidates, if approved. On the one hand, President Trump has threatened to impose significant tariffs on pharmaceutical manufacturers that do not adopt pricing policies such as most favored nation pricing, which would tie the price for drugs in the U.S. to the lowest price in a group of other countries. In response, multiple manufacturers have reportedly entered into confidential pricing agreements with the federal government. Even regulatory proposals or executive actions that are ultimately deemed unlawful could negatively impact the U.S. pharmaceutical sector and our business. In addition, pharmaceutical pricing and marketing has long been the subject of considerable discussion in Congress and among policymakers.

Individual states in the United States have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain drug access, marketing cost disclosure, drug price reporting and other transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. Some states have enacted legislation creating so-called prescription drug affordability boards with the goal of imposing price limits on certain drugs in these states, and at least one state board is imposing an upper payment limit. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, financial condition, results of operations and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs.

Similar political, economic and regulatory developments are occurring in the EU and may affect the ability of pharmaceutical companies to profitably commercialize their products. In addition to continuing pressure on prices and cost containment measures, legislative developments at the EU or member state level may result in significant additional requirements or obstacles. The delivery of healthcare in the EU, including the establishment and operation of health services and the pricing and reimbursement of medicines, is almost exclusively a matter for national, rather than EU, law and policy. National governments and health service providers have different priorities and approaches to the delivery of health care and the pricing and reimbursement of products in that context. In general, however, the healthcare budgetary constraints in most EU member states have resulted in restrictions on the pricing and reimbursement of medicines by relevant health service providers. Coupled with ever-increasing EU and national regulatory burdens on those wishing to develop and market products, this could restrict or regulate post-approval activities and affect the ability of pharmaceutical companies to commercialize their products. In international markets, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies.

In the EU, potential reductions in prices and changes in reimbursement levels could be the result of different factors, including reference pricing systems, parallel distribution and parallel trade. It could also result from the application of external reference pricing mechanisms, which involve benchmarking or arbitrage between low-priced and high-priced countries. Reductions in the pricing of our medicinal products in one EU member state could affect the price in other EU member states and, thus, have a negative impact on our financial results.

Health Technology Assessment ("HTA") of medicinal products in the EU is an essential element of the pricing and reimbursement decision-making process in a number of EU member states. The outcome of HTA has a direct impact on the pricing and reimbursement status granted to a medicinal product, as HTA bodies support national authorities in deciding on the use, price and reimbursement level of new health technologies. A negative HTA by a leading and recognized HTA body concerning a medicinal product could undermine the prospects of obtaining reimbursement for such product not only in the EU member state in which the negative assessment was issued, but also in other EU member states.

In 2011, Directive 2011/24/EU was adopted at the EU level. This Directive establishes a voluntary network of national authorities or bodies responsible for HTA in the individual EU member states. The network facilitates and supports the exchange of scientific information concerning HTAs. Further to this, on December 15, 2021, Regulation (EU) 2021/2282 on health technology assessment, amending Directive 2011/24/EU, was adopted. The Regulation entered into force in January 2022 and has been applicable since January 12, 2025, with phased implementation based on the type of product, *i.e.*, oncology medicines and advanced therapy medicinal products as of 2025, orphan medicinal products as of 2028, and all other centrally authorized medicinal products from 2030. The Regulation is intended to boost cooperation among EU Member States in assessing health technologies, including new medicinal products, and to provide the basis for cooperation at the EU level for joint clinical assessments in these areas. It permits EU Member States to use common HTA tools, methodologies, and procedures across the EU, working together in four main areas, including joint clinical assessment of the innovative health technologies with the highest potential impact for patients, joint scientific consultations whereby developers can seek advice from HTA authorities, identification of emerging health technologies to identify promising technologies early, and continuing voluntary cooperation in other areas. Individual EU Member States will continue to be responsible for assessing nonclinical (*e.g.*, economic, social, ethical) aspects of health technologies and for making national decisions on pricing and reimbursement.

Employees and Human Capital Resources

As of December 31, 2025, we had full-time employees, of which had M.D. or Ph.D. degrees. Within our workforce, employees were engaged in research and development and were engaged in business development, finance, legal and general management and administration as of December 31, 2025. None of our employees are represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity incentive plans are to attract, retain and reward personnel through the granting of equity-based compensation awards in order to increase shareholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

We believe that our future success largely depends upon our continued ability to attract and retain highly skilled employees. We provide our employees with competitive salaries and bonuses, opportunities for equity ownership, development programs that enable continued learning and growth and a robust employment package that promotes well-being across all aspects of their lives, including health care, retirement planning and paid time off.

Facilities

Our corporate headquarters is located in Somerville, Massachusetts, where we lease and occupy approximately 71,000 square feet of office and laboratory space at 101 South Street, Suite 900, Somerville, MA 02143. The current term of such lease expires in August 2031. We also lease approximately 75,000 square feet of office and laboratory space at 4 Corporate Drive, Andover, MA. The current term of such lease expires in December 2034.

We believe that our facilities are adequate for our current needs and for the foreseeable future. To meet the future needs of our business, we may lease additional or alternate space. We believe that suitable additional or substitute space at commercially reasonable terms will be available as needed to accommodate any future expansion of our operations.

Legal Proceedings

From time to time, we may become involved in legal proceedings arising from the ordinary course of business. We record a liability for such matters when it is probable that future losses will be incurred and that such losses can be reasonably estimated. Significant judgment by us is required to determine both probability and the estimated amount. Our management is currently not aware of any legal matters that could have a material effect on our financial position, results of operations or cash flows.

MANAGEMENT

Executive Officers, Key Employees and Directors

The following table sets forth information regarding our executive officers, key employees and directors as of December 19, 2025.

Name	Age	Position
Executive Officers:		
Michael Nally, M.B.A.	49	Chief Executive Officer, President and Director
Gevorg Grigoryan, Ph.D.	45	Co-Founder and Chief Technology Officer
Beth Grous	58	Chief People Officer
Sean Martin, J.D.	62	Chief Legal Officer and General Counsel
Jason Silvers, M.D., J.D.	53	Chief Financial Officer
Non-Employee Directors:		
Noubar Afeyan, Ph.D.	63	Chairperson of the Board
Frances Arnold, Ph.D.	69	Director
Stéphane Bancel, M.B.A.	53	Director
Marsha H. Fanucci, M.B.A.	72	Director
Jane Mendillo, M.B.A.	67	Director
Paul Parker, M.B.A.	62	Director
Nancy A. Simonian, M.D.	65	Director
Rupert Vessey, B.M. B.Ch., D.Phil., FRCP	60	Director

(1) Member of the compensation committee.
(2) Member of the audit committee.
(3) Member of the nominating and corporate governance committee.

Executive Officers

Michael Nally, M.B.A., has served as our President and Chief Executive Officer and as a member of the Company's board of directors (the "Board") since March 2021. Mr. Nally has also served as a CEO-Partner at Flagship Pioneering since March 2021. Previously, Mr. Nally served in multiple roles at Merck & Co., Inc. (NYSE: MRK) from August 2003 to March 2021, including most recently as executive vice president and chief marketing officer from January 2019 until March 2021. Additionally, Mr. Nally has served as a member of the board of directors for PPG Industries, Inc. (NYSE: PPG) ("PPG Industries") since February 2021. Mr. Nally holds an M.B.A. from Harvard Business School, a degree in accounting and finance from the London School of Economics and a B.A. in economics from Middlebury College. We believe that Mr. Nally's leadership and business expertise in the pharmaceutical industry provides him with the appropriate set of skills to serve as a member of our Board.

Dr. Jason Silvers, M.D., J.D., has served as our Chief Financial Officer since July 2022. Previously, Dr. Silvers served in multiple roles at Goldman Sachs & Co. ("Goldman Sachs") from August 2002 to June 2022, where he became a managing director in 2010 and partner in 2014. Most recently, he co-managed healthcare investment banking for Goldman Sachs in Europe, the Middle East and Africa. Dr. Silvers holds a J.D. from Yale Law School, an M.D. from the Johns Hopkins University School of Medicine and a B.S. in chemistry from Brown University. He also completed one year of a neurosurgical residency at Jackson Memorial Hospital and was awarded the Surgical Intern of the Year distinction.

Dr. Gevorg Grigoryan, Ph.D., is our co-founder and has served as our Chief Technology Officer since the founding of the company in 2018. He has also held various appointments at Dartmouth College since 2011 (tenured in 2017), where he conducted research and served on the faculty in the Departments of Computer Science, Biological Sciences, and Chemistry, focusing on uncovering the principles that link protein sequence, structure, and function. Dr. Grigoryan has authored over 50 peer-reviewed publications in leading journals including *Nature*, *Science*, and *PNAS* and has received recognition from the Alfred P. Sloan Foundation, National Institutes of Health, National Science Foundation, and the American Cancer Society. He holds a Ph.D. from the Massachusetts Institute of Technology and earned his B.S. in computer science and biochemistry from the University of Maryland, Baltimore County. Additionally, he completed postdoctoral training at the University of Pennsylvania.

Beth Grous has served as our Chief People Officer since April 2023. She has also served as a part-time venture advisor at SemperVirens Venture Capital since January 2019 and has served on the board of directors of the Tripadvisor Foundation since September 2015. Previously, Ms. Grous served as the senior vice president and chief people officer at Tripadvisor, Inc. (NASDAQ: TRIP) from September 2015 to March 2023. Prior to that role, she served as senior vice president of global human resources at Nuance Communications, Inc., as well as vice president and head of human resources at Sanofi S.A.'s Boston hub. She holds a B.A. in English from Cornell University.

Sean Martin, J.D., has served as our Chief Legal Officer and General Counsel since April 2022. Previously, Mr. Martin served as general counsel and senior vice president at Baxter International Inc. (NYSE: BAX) from February 2017 to April 2022. Prior to that role, he was general counsel, senior vice president and secretary at Apollo Education Group, Inc. He also served as vice president for commercial law and corporate law at Amgen Inc. and vice president and deputy general counsel for litigation at Fresenius Medical Care North America. Earlier in his career, Mr. Martin was a law firm partner at Foley & Lardner LLP and served as an Assistant U.S. Attorney in Chicago for eight years, prosecuting federal criminal cases. Mr. Martin holds a J.D. from Harvard Law School and a B.A. in history from the University of Michigan.

Non-Executive Directors

Dr. Noubar Afeyan, Ph.D., is a co-founder and has served as the chairman of our Board since 2018. In 1999, Dr. Afeyan founded Flagship Pioneering and serves as its Chief Executive Officer. Flagship Pioneering is an institutional platform for the creation, development and capitalization of pioneering biotechnology companies, with over 100 ventures founded and about $14 billion in assets under its management. Dr. Afeyan is co-founder and has served as chairman of the board of Moderna, Inc. (NASDAQ: MRNA) ("Moderna") since 2012. He has previously served on the boards of numerous privately and publicly held companies, including Omega Therapeutics, Inc. (NASDAQ: OMGA) from July 2016 to August 2023 and Rubius Therapeutics, Inc. (NASDAQ: RUBY) from 2013 to November 2022. He received a Ph.D. in biochemical engineering from the Massachusetts Institute of Technology and a B.S. in chemical engineering from McGill University. Dr. Afeyan was previously a visiting lecturer of business administration at Harvard Business School and was previously a senior lecturer at MIT's Sloan School of Management where he taught courses on technology entrepreneurship, innovation and leadership. We believe that Dr. Afeyan's significant experience co-founding, leading, and investing in numerous biotechnology companies make him qualified to serve on our Board.

Dr. Frances H. Arnold, Ph.D., has served as a member of our Board since July 2019. Dr. Arnold manages a research group, is the Linus Pauling Professor of Chemical Engineering, Bioengineering and Biochemistry, and is the Director of the Donna and Benjamin M. Rosen Bioengineering Center, all at the California Institute of Technology. She joined the California Institute of Technology in 1986 and has served as a Visiting Associate, Assistant Professor, Professor, and Director. Her laboratory focuses on protein engineering by directed evolution, with applications in alternative energy, chemicals, and medicine. Dr. Arnold is the recipient of numerous honors, including the Nobel Prize in Chemistry, the Millennium Technology Prize, induction into the National Inventors Hall of Fame, Fellow of the National Academy of Inventors, the ENI Prize in Renewable and Nonconventional Energy, the U.S. National Medal of Technology and Innovation, and the Charles Stark Draper Prize of the U.S. National Academy of Engineering. Dr. Arnold has also served as a director of Alphabet Inc. (NASDAQ: GOOG) since October 2019 and Illumina, Inc. (NASDAQ: ILMN) since January 2016. Dr. Arnold holds a B.S. in mechanical and aerospace engineering from Princeton University and a Ph.D. in chemical engineering from the University of California, Berkeley.

Stéphane Bancel, M.B.A., has served as a member of our Board since September 2019. Mr. Bancel has served as Moderna's chief executive officer since October 2011 and a venture partner at Flagship Pioneering since May 2013. Before joining Moderna, Mr. Bancel served for five years as CEO of the French diagnostics company bioMérieux SA. From July 2000 to March 2006, he served in various roles at Eli Lilly and Company, including as Managing Director, Belgium, and as Executive Director, Global Manufacturing Strategy and Supply Chain. Prior to Eli Lilly, Mr. Bancel served as Asia-Pacific Sales and Marketing Director for bioMérieux. Mr. Bancel has been a member of Moderna's board of directors since March 2011 and of Qiagen N.V.'s (NYSE: QGEN) board of directors from June 2013 to June 2021. Mr. Bancel was nominated Chevalier of the Legion d'honneur in 2022, the highest recognition in France, and was elected to the U.S. National Academy of Engineering in 2024. Mr. Bancel holds an M.B.A. from Harvard Business School, a Master of Science degree in chemical engineering from the University of Minnesota and Master of Engineering degree from École Centrale Paris. We believe that Mr. Bancel's extensive experience leading global life sciences organizations provides him with the appropriate set of skills to serve as a member of our Board.

Marsha H. Fanucci, M.B.A., has been a member of our Board since March 2025. Since 2009, Ms. Fanucci has been an independent consultant. From 2004 to 2009, she served as senior vice president and chief financial officer of Millennium Pharmaceuticals, Inc. (“Millennium”), which was subsequently acquired by Takeda Pharmaceuticals Company Limited (NYSE: TAK) ("Takeda"). She previously served in various other roles at Millennium, including as vice president, finance and corporate strategy and vice president, corporate development. Ms. Fanucci previously served as a director of Syros Pharmaceuticals, Inc. (NASDAQ: SYRS) from October 2015 to February 2025, Alnylam Pharmaceuticals, Inc. (NASDAQ: ALNY) from December 2010 to September 2023, Cyclerion Therapeutics, Inc. (NASDAQ: CYCN) from March 2019 to May 2023 and Forma Therapeutics Holdings, Inc. (NASDAQ: FMTX) from October 2014 to October 2022. Ms. Fanucci received her B.S. in pharmacy from West Virginia University and her M.B.A. from Northeastern University. We believe that Ms. Fanucci’s experience as a biotechnology executive and expertise in corporate development, financial strategy and governance provide her with the appropriate set of skills to serve as a member of our Board.

Jane L. Mendillo, M.B.A., has served as a member of our Board since December 2022. Ms. Mendillo has spent over 30 years in the fields of endowment and investment management. As the CEO of the Harvard Management Company from 2008 to 2014, she managed Harvard University’s approximately $37 billion global endowment and related assets across a wide range of public and private markets. Ms. Mendillo was previously the chief investment officer at Wellesley College for six years. Prior to that, she spent 15 years at the Harvard Management Company in various investment roles. Earlier in her career she was a management consultant at Bain & Co. and worked at the Yale Investment Office. Ms. Mendillo has also served as director of Lazard Inc. (NYSE: LAZ) from April 2016 to April 2025 and served as director of General Motors Co (NYSE: GM) from June 2016 to June 2022. She also serves as Trustee to the Old Mountain Private Trust Company, and Chair of the Investment Committee of Springboard Capital. Ms. Mendillo holds an M.B.A. from the Yale School of Management and a B.A. from Yale College. We believe that Ms. Mendillo’s extensive investment management experience provide her with the appropriate set of skills to serve as a member of our Board.

Paul Parker, M.B.A., has served as a member of our Board since June 2025. Mr. Parker has also served as managing partner of capital solutions and value realization at Flagship Pioneering since September 2024. Previously, Mr. Parker held multiple leadership roles at Thermo Fisher Scientific Inc. (NYSE: TMO) from April 2020 to August 2024, most recently as senior vice president, head of strategy and corporate development, as well as at Goldman Sachs from August 2014 to February 2020, where he served as co-chairman of the Global Mergers and Acquisitions Group. Mr. Parker previously served as a member of the Board of The Clorox Company (NYSE: CLX) from November 2020 to November 2024. He earned an M.B.A. with distinction from Harvard Business School and a B.A. in international studies from the University of North Carolina at Chapel Hill. We believe that Mr. Parker’s 35 years of experience in the banking, pharmaceutical and biotechnology industries, as well as in M&A, corporate strategy and organizational leadership, provide him with the appropriate set of skills to serve as a member of our Board.

Dr. Nancy A. Simonian, M.D., has served as a member of our Board since June 2024. She served as chief executive officer of Syros Pharmaceuticals, Inc. (NASDAQ: SYRS) (“Syros”) from June 2012 to December 2023 and served as a member of the board of directors until February 2025. From 2001 to October 2011, Dr. Simonian was employed by Takeda and at Millennium, prior to its acquisition by Takeda, most recently as chief medical officer and senior vice president of clinical, medical and regulatory affairs. She currently is a member of the board of directors of Bayer AG (BAYRY), Alltrna, Inc., a private biotechnology company, and of the Damon Runyon Cancer Research Foundation. She previously served as a member of the board of directors of Seagen Inc. and Evelo Biosciences, Inc., each a publicly traded biotechnology company. Prior to joining the biotechnology industry, Dr. Simonian was on the faculty of Massachusetts General Hospital and Harvard Medical School as an assistant professor of neurology. She received a B.A. in biology from Princeton University and an M.D. from the University of Pennsylvania School of Medicine. We believe that Dr. Simonian’s extensive experience as a physician-scientist, executive and board member provide her with the appropriate set of skills to serve as a member of our Board.

Dr. Rupert Vessey, B.M. B.Ch., D.Phil., FRCP, has served as a member of our Board since June 2024. Dr. Vessey joined Flagship Pioneering as Executive Partner and Chief Scientist in July 2023 after retiring from Bristol-Myers Squibb Company (NYSE: BMY) ("Bristol-Meyers Squibb"), where he had served as the President of Research and Early Development since 2019. Prior to joining Bristol-Myers Squibb, he was President of Global Research and Early Development at Celgene Corporation from 2015 to 2019. Before joining Celgene Corporation, Dr. Vessey held various research and development senior management positions during his 10-year tenure at Merck. Dr. Vessey has also served as a member of the board of directors of Bio-Techne Corp (NASDAQ: TECH) since July 2019. He graduated from the University of Oxford with degrees in physiological sciences (B.A., M.A.), clinical medicine (B.M., B.Ch.) and a Doctor of Philosophy (DPhil) in molecular immunology. We believe that Dr. Vessey’s extensive experience guiding the expansion of therapeutics and bio-platforms provides him with the appropriate set of skills to serve as a member of our Board.

Family Relationships

There are no family relationships among any of our executive officers or directors.

Composition of our Board of Directors

Our business and affairs are managed under the direction of the Board, which currently consists of seven members. The primary responsibilities of our Board are to provide oversight, strategic guidance, counseling and direction to our management. Our Board meets on a regular basis and additionally as required.

Certain members of our Board were elected under the provisions of our amended and restated certificate of incorporation, as currently in effect (the "certificate of incorporation"), and agreements with our stockholders. These board composition provisions will terminate upon the completion of this offering. Upon the termination of these provisions, there will be no further contractual obligations regarding the election of our directors. Our nominating and corporate governance committee and our Board may therefore consider a broad range of factors relating to the qualifications and background of nominees. Our nominating and corporate governance committee's and our Board's priority in selecting board members is identification of persons who will further the interests of our stockholders through their established record of professional accomplishment, the ability to contribute positively to the collaborative culture among board members, knowledge of our business, understanding of the competitive landscape, professional and personal experiences and expertise relevant to our growth strategy. Our directors hold office until their successors have been elected and qualified or until the earlier of their resignation or removal. Our amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, and our amended and restated bylaws, which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part, also provide that our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds of the votes that all our stockholders would be entitled to cast in an annual election of directors, and that any vacancy on our Board, including a vacancy resulting from an enlargement of our Board, may be filled only by vote of a majority of our directors then in office.

Staggered Board

Our amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, and our amended and restated bylaws, which will be effective upon the effectiveness of the registration statement of which this prospectus forms a part, will permit our Board to establish the authorized number of directors from time to time by resolution. Each director serves until the expiration of the term for which such director was elected or appointed, or until such director's earlier death, resignation or removal. In accordance with our amended and restated certificate of incorporation, our Board will be divided into three classes with staggered three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- the Class I directors will be and , and their terms will expire at our first annual meeting of stockholders following this offering, to be held in ;
- the Class II directors will be and , and their terms will expire at our second annual meeting of stockholders following this offering, to be held in ; and
- the Class III directors will be and , and their terms will expire at our third annual meeting of stockholders following this offering, to be held in .

We expect that any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one third of the directors. The division of our Board into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control.

This classification of our Board may have the effect of delaying or preventing changes in control of our company.

Director Independence

Under the listing standards, requirements and rules of The Nasdaq Stock Market LLC (the "Nasdaq Listing Rules"), independent directors must comprise a majority of our Board as a listed company within one year of the listing date.

Our Board has undertaken a review of the independence of each director. Based on information provided by each director concerning his or her background, employment and affiliations, including family relationships, our Board has determined that , and do not have relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the Nasdaq Listing Rules. Our Board has determined that Mr. Nally, by virtue of his position as our current Chief Executive Officer, is not independent under applicable rules and regulations of the Securities and Exchange Commission (the "SEC") and the Nasdaq Listing Rules. In making these determinations, our Board considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our Board deemed relevant in determining their independence, including the beneficial ownership of our shares by each non-employee director and the transactions described in "*Certain Relationships and Related Person Transactions*."

Board Policies

In connection with this offering, we intend to adopt policies and procedures for director candidates for our nominating and corporate governance committee, which will provide that factors, such as a candidate's character, judgment, skills, education, expertise, and absence of conflicts of interest should be considered in determining director candidates. Our priority in selection of board members will be identification of members who will further the interests of our stockholders through their established records of professional accomplishment, their ability to contribute positively to the collaborative culture among board members, and their knowledge of our business and understanding of the competitive landscape in which we operate and adherence to high ethical standards.

Board Leadership Structure and Board's Role in Risk Oversight

Dr. Afeyan is the current chair of our Board and Mr. Nally is our current Chief Executive Officer, hence the roles of chair of our Board and Chief Executive Officer are separated. We believe that separating these positions allows our Chief Executive Officer to focus on our day-to-day business, while allowing the chair of our board to lead the Board in its fundamental role of providing advice to and independent oversight of management. Our Board recognizes the time, effort and energy that the Chief Executive Officer is required to devote to his position in the current business environment, as well as the commitment required to serve as chair of our Board, particularly as the Board's oversight responsibilities continue to grow. While our bylaws and corporate governance guidelines do not require that our board chair and Chief Executive Officer positions be separate, our Board believes that having separate positions is the appropriate leadership structure for us at this time and demonstrates our commitment to good corporate governance.

Risk is inherent with every business, and how well a business manages risk can ultimately determine its success. We face a number of risks, including risks relating to our financial condition, development and commercialization activities, operations, strategic direction and intellectual property as more fully discussed in "*Risk Factors*" appearing elsewhere in this prospectus. Management is responsible for the day-to-day management of risks we face, while our Board, as a whole and through its committees, has responsibility for the oversight of risk management. In its risk oversight role, our Board has the responsibility to satisfy itself that the risk management processes designed and implemented by management are adequate and functioning as designed.

The role of the Board in overseeing the management of our risks is conducted primarily through committees of the Board, as disclosed in the descriptions of each of the committees below and in the charters of each of the committees. The full Board (or the appropriate board committee in the case of risks that are under the purview of a particular committee) discusses with management our major risk exposures, their potential impact on us, and the steps we take to manage them. When a board committee is responsible for evaluating and overseeing the management of a particular risk or risks, the chairperson of the relevant committee reports on the discussion to the full Board during the committee reports portion of the next board meeting. This enables the Board and its committees to coordinate the risk oversight role, particularly with respect to risk interrelationships.

Committees of Our Board of Directors

Our Board has established an audit committee, a compensation committee and a nominating and corporate governance committee. The composition and responsibilities of each of the committees of our Board are described below. Members serve on these committees until their resignation or until otherwise determined by our Board. Each committee intends to adopt a written charter that satisfies the application rules and regulation of the SEC and the Nasdaq Listing Rules, which we will post to our website at *www.generatebiomedicines.com* upon the completion of this offering. Our Board may establish other committees as it deems necessary or appropriate from time to time.

Audit Committee

Upon the completion of this offering, our audit committee will consist of , and , and the chair of our audit committee will be . Our Board has determined that each member of the audit committee is independent under Nasdaq Listing Rules and Rule 10A-3(b)(1) of the Exchange Act and can read and understand fundamental financial statements in accordance with applicable requirements. Our Board has also determined that is an "audit committee financial expert" within the meaning of SEC regulations. In arriving at these determinations, our Board has examined each audit committee member's scope of experience and the nature of their employment in the corporate finance sector.

The primary purpose of the audit committee is to discharge the responsibilities of our Board with respect to our corporate accounting and financial reporting processes, systems of internal control and financial statement audits, and to oversee our independent registered public accounting firm. Specific responsibilities of our audit committee include:

- helping our Board oversee our corporate accounting and financial reporting processes;
- managing the selection, engagement, qualifications, independence and performance of a qualified firm to serve as the independent registered public accounting firm to audit our consolidated financial statements;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing related person transactions;
- establishing insurance coverage for our officers and directors;
- overseeing the preparation of our annual proxy statement, reviewing with management our consolidated financial statements to be included in our quarterly reports to be filed with the SEC and reviewing with management the "*Risk Factors*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" disclosures in our periodic reports filed with the SEC;
- oversee our risk management policies, procedures and practices, including those related to cybersecurity; and
- approving, or, as permitted, pre-approving, audit and permissible non-audit services to be performed by the independent registered public accounting firm.

Our audit committee will operate under a written charter, which will be effective upon the completion of this offering, that satisfies the applicable Nasdaq Listing Rules.

Compensation Committee

Upon the completion of this offering, our compensation committee will consist of , and , and the chair of our compensation committee will be . Our Board has determined that each member of the compensation committee is independent under the Nasdaq Listing Rules and is a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act.

The primary purpose of our compensation committee is to discharge the responsibilities of our Board in overseeing our compensation policies, plans and programs and to review and determine the compensation to be paid to our executive officers, directors and other senior management, as appropriate. Specific responsibilities of our compensation committee include:

- annually reviewing and recommending to our Board the corporate goals and objectives relevant to the compensation of our Chief Executive Officer;
- evaluating the performance of our Chief Executive Officer in light of such corporate goals and objectives and, based on such evaluation, recommending to our Board the cash compensation of our Chief Executive Officer;
- reviewing and approving the compensation arrangements with our other executive officers and certain other senior management;
- reviewing and recommending to our Board the compensation paid to our directors;
- administering our equity incentive plans and other benefit programs;
- overseeing and administering our compensation and similar plans; and
- reviewing and establishing general policies relating to compensation and benefits of our employees, including our overall compensation philosophy.

Our compensation committee will operate under a written charter, which will be effective upon the completion of this offering, that satisfies the applicable Nasdaq Listing Rules.

Nominating and Corporate Governance Committee

Upon the completion of this offering, our nominating and corporate governance committee will consist of , and , and the chair of our nominating and corporate governance committee will be . Our Board has determined that each member of the nominating and corporate governance committee is independent under the Nasdaq Listing Rules, a non-employee director, and free from any relationship that would interfere with the exercise of his or her independent judgment.

The primary purpose of the nominating and corporate governance committee is to discharge the responsibilities of our Board with respect to our corporate governance functions and to identify, communicate with, evaluate and recommend candidates for our Board. Specific responsibilities of our nominating and corporate governance committee include:

- identifying and evaluating candidates, including the nomination of incumbent directors for reelection and nominees recommended by stockholders, to serve on our Board;
- considering and making recommendations to our Board regarding the composition and chairmanship of the committees of our Board;
- instituting plans or programs for the continuing education of our Board and orientation of new directors;
- developing and making recommendations to our Board regarding corporate governance guidelines and matters; and
- overseeing periodic evaluations of the Board's performance, including committees of the Board and management.

Our nominating and corporate governance committee will operate under a written charter, which will be effective upon the completion of this offering, that satisfies the applicable Nasdaq Listing Rules.

Code of Business Conduct and Ethics

In connection with this offering, we intend to adopt an amended and restated code of business conduct and ethics that applies to all our employees, officers and directors. This includes our principal executive officer, principal financial officer and principal accounting officer or controller, or persons performing similar functions. The full text of our code of business conduct and ethics will be posted on our website at *www.generatebiomedicines.com*. We intend to disclose on our website any future amendments of our code of business conduct and ethics or waivers that exempt any principal executive officer, principal financial officer, principal accounting officer or controller, persons performing similar functions or our directors from provisions in the code of business conduct and ethics. Information contained on, or accessible through, our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is only an inactive textual reference.

Compensation Committee Interlocks and Insider Participation

None of the members of the compensation committee is currently, or has been at any time, one of our officers or employees. None of our officers currently serves, or has served during the last calendar year, as a member of the Board or compensation committee of any entity that has one or more executive officers serving as a member of our Board or compensation committee.

Compensation Recovery

In connection with this offering, we intend to adopt a compensation recovery policy that applies to our officers. Under the Sarbanes-Oxley Act, in the event of misconduct that results in a financial restatement that would have reduced a previously paid incentive amount, we can recoup those improper payments from our Chief Executive Officer and Chief Financial Officer. The SEC also recently adopted rules which direct national stock exchanges to require listed companies to implement policies intended to recoup bonuses paid to executives if the company is found to have misstated its financial results.

Limitations on Liability and Indemnification

As permitted by Delaware law, provisions in our amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, and amended and restated bylaws, which became effective upon the effectiveness of this registration statement, limit or eliminate the personal liability of officers and directors for a breach of their fiduciary duty of care as a director. The duty of care generally requires that, when acting on behalf of the corporation, an officer or director exercise an informed business judgment based on all material information reasonably available to him or her. Consequently, an officer or director will not be personally liable to us or our stockholders for monetary damages or breach of fiduciary duty as an officer or director, except for liability for:

- any breach of the officer or director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- for our directors, unlawful payments of dividends or unlawful stock repurchases, or redemptions as provided in Section 174 of the Delaware General Corporation Law (the "DGCL");
- for our officers, any derivative action by or in the right of the corporation;
- any act related to unlawful stock repurchases, redemptions or other distributions or payments of dividends; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not limit or eliminate our rights or any stockholder's rights to seek non-monetary relief, such as injunctive relief or rescission. These provisions will not alter an officer or director's liability under other laws, such as the federal securities laws or other state or federal laws. Our amended and restated certificate of incorporation that will become effective immediately prior to the completion of this offering also authorizes us to indemnify our officers, directors and other agents to the fullest extent permitted under Delaware law.

As permitted by Delaware law, our amended and restated bylaws, which will become effective upon the effectiveness of this registration statement will provide that:

- we will indemnify our directors, officers, employees and other agents to the fullest extent permitted by law;
- we must advance expenses to our directors and officers, and may advance expenses to our employees and other agents, in connection with a legal proceeding to the fullest extent permitted by law; and
- the rights provided in our amended and restated bylaws are not exclusive.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director or officer, then the liability of our directors or officers will be so eliminated or limited to the fullest extent permitted by Delaware law, as so amended. Our amended and restated bylaws will also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in connection with their services to us, regardless of whether our bylaws permit such indemnification. We have obtained such insurance.

In addition to the indemnification that will be provided for in our amended and restated certificate of incorporation and amended and restated bylaws, we plan to enter into separate indemnification agreements with each of our directors and executive officers, which may be broader than the specific indemnification provisions contained in the DGCL. These indemnification agreements may require us, among other things, to indemnify our directors and executive officers for some expenses, including attorneys' fees, expenses, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of his service as one of our directors or executive officers or any other company or enterprise to which the person provides services at our request. We believe that these provisions and agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

This description of the indemnification provisions of our amended and restated certificate of incorporation, our amended and restated bylaws and our indemnification agreements is qualified in its entirety by reference to these documents, each of which is attached as an exhibit to the registration statement of which this prospectus forms a part.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable.

There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

Rule 10b5-1 Sales Plans

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend a Rule 10b5-1 plan in some circumstances and may terminate a plan at any time. Our directors and executive officers also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information subject to compliance with the terms of our insider trading policy. Prior to 180 days after the date of this offering, subject to early termination, the sale of any shares under such plans would be prohibited by the lock-up agreement that the director or officer has entered into with the underwriters.

EXECUTIVE COMPENSATION

The following discussion contains forward looking statements that are based on our current plans, considerations, expectations, and determinations regarding future compensation programs. The actual amount and form of compensation and the compensation policies and practices that we adopt in the future may differ materially from the programs as summarized in this discussion.

As an emerging growth company and a smaller reporting company, we have opted to comply with the executive compensation disclosure rules applicable to "emerging growth companies" and "smaller reporting companies," as such terms are defined in the rules promulgated under the Securities Act. The compensation provided to our named executive officers for the fiscal year ended December 31, 2024 ("Fiscal Year 2024") is detailed in the 2024 Summary Compensation Table and accompanying footnotes and narrative that follow.

Our named executive officers for Fiscal Year 2024 are:

- Michael Nally, M.B.A., our Chief Executive Officer;
- Jason Silvers, M.D., J.D., our Chief Financial Officer; and
- Alexandra Snyder Charen, M.D., our former Executive Vice President, Research and Development.

To date, the compensation of our named executive officers has consisted of a combination of base salary, cash incentive compensation, and long-term incentive compensation, as more fully described below. Our executive officers, like all full-time employees, are eligible to participate in our health, welfare, and retirement benefit plans. As we transition from a private company to a publicly traded company, we intend to evaluate our compensation values and philosophy and compensation plans and arrangements as circumstances require.

2024 Summary Compensation Table

The following table shows the total compensation earned by, or paid to, our named executive officers for services rendered to us in all capacities during Fiscal Year 2024.

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards ($)[1][2]	Non-Equity Incentive Plan Compensation ($)[3]	All Other Compensation ($)[4]	Total ($)
Michael Nally, M.B.A. *Chief Executive Officer*	2024	628,750	—	4,222,501	401,321	11,725	5,264,297
Jason Silvers, M.D., J.D. *Chief Financial Officer*	2024	490,500	—	1,412,015	266,112	12,075	2,180,702
Alexandra Snyder Charen, M.D. *Executive Vice President, Research and Development*[5]	2024	490,500	—	1,412,015	255,024	31,258	2,188,797

(1) The amounts reported represent the aggregate grant date fair value of stock option awards granted to our named executive officers in Fiscal Year 2024, computed in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718 ("FASB ASC Topic 718"), disregarding any estimates of forfeitures related to service-based vesting. For the performance-based options granted to Mr. Nally in 2024, the amount reported is based upon the probable outcome of the performance conditions. For these awards, we determined that as of the date of the grant it was not probable, as defined under applicable accounting guidance, that the applicable performance conditions would be achieved and, accordingly, the grant date fair value of such awards is $0. The value of these awards at the grant date assuming the maximum achievement of the performance conditions is $666,000. The assumptions used in calculating the grant date fair values of the option awards reported in this column are set forth in Note 4 of our consolidated financial statements for Fiscal Year 2024, included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for these option awards and do not correspond to the actual economic value that may be received by our named executive officers upon the exercise of the option awards or any sale of the underlying securities.

(2) For Mr. Nally, the amount reported also includes the incremental fair value attributable to the partial accelerated vesting of a performance-based stock option granted to Mr. Nally in 2021. The performance-based stock options granted to Mr. Nally in March 2024 were amended in December 2024 to clarify the vesting terms and to extend the end of the performance period from December 31, 2024 to December 31, 2025 but such amendment resulted in no incremental expense because achievement of the applicable performance conditions was deemed not probable on the modification date.
(3) The amounts reported represent annual bonuses earned for Fiscal Year 2024 based on achievement of corporate performance measures and individual performance, as described in more detail under the heading "*—2024 Cash Bonuses*" below.
(4) The amounts reported represent employer matching contributions made on behalf of our named executive officers under our 401(k) plan and, for Dr. Snyder, $19,183 for reimbursement of expenses incurred in connection with travel between her home and our offices and housing in the greater Boston, Massachusetts area.
(5) Dr. Snyder's employment with us terminated in July 2025.

Narrative Disclosure to the 2024 Summary Compensation Table

2024 Base Salaries

Mr. Nally, Dr. Silvers, and Dr. Snyder each receive (or, in the case of Dr. Snyder, received) a base salary to compensate them for services rendered to us. Base salaries are intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role, and responsibilities. Base salaries are reviewed annually, typically in connection with our annual performance review process, approved by the Company's board of directors (the "Board"), and may be adjusted from time to time to realign salaries with market levels after taking into account individual responsibilities, performance, and experience.

For Fiscal Year 2024, the base salaries for Mr. Nally, Dr. Silvers and Dr. Snyder were $634,500, $495,000 and $495,000, respectively.

2024 Cash Bonuses

For Fiscal Year 2024, each of Mr. Nally, Dr. Silvers and Dr. Snyder was eligible to earn an annual cash bonus based on the achievement of certain corporate performance milestones and individual performance. Mr. Nally had a target annual bonus for Fiscal Year 2024 equal to 55% of his annual base salary, and Dr. Silvers and Dr. Snyder each had a target annual bonus for Fiscal Year 2024 equal to 40% of his or her respective annual base salary.

Each named executive officer's annual cash bonus for Fiscal Year 2024 was determined by reference to the achievement of pre-determined corporate performance goals related to our clinical programs, finance, and hiring and retention and individual performance. Following review and determinations of corporate and individual performance for Fiscal Year 2024, the Board determined that the corporate performance goals were achieved at 112% of target and that the individual performance goals for Mr. Nally, Dr. Silvers and Dr. Snyder were achieved at 103%, 120% and 115% of target, respectively. The annual cash bonus paid to each of our named executive officers for Fiscal Year 2024 is set forth in the "Non-Equity Incentive Plan Compensation" column of the "2024 Summary Compensation Table" above.

Equity Incentive Compensation

Although we do not yet have a formal policy with respect to the grant of equity incentive awards to our executive officers, we believe equity grants provide our executives with a strong link to our long-term performance, create an ownership culture, and help to align the interests of our executives and our stockholders. In addition, we believe equity grants promote executive retention because they incentivize our executive officers to remain in our service during the vesting period. During Fiscal Year 2024, we granted our named executive officers options to purchase common stock of the Company that vest over four years and, for certain options granted to Mr. Nally, that vest based upon achievement of performance goals. In addition, in Fiscal Year 2024, the Board approved the partial acceleration of a performance-based stock option granted to Mr. Nally in 2021 and amended the performance-based stock options granted to Mr. Nally in 2024 to clarify the vesting terms and extend the end of the performance period from December 31, 2024 to December 31, 2025. For additional information regarding outstanding equity awards held by our named executive officers as of December 31, 2024, see the "Outstanding Equity Awards at 2024 Fiscal Year End" table below.

401(k) Plan and Health and Welfare Benefits

We currently maintain a tax-qualified 401(k) retirement savings plan (the "401(k) Plan") for our employees, including our named executive officers, who satisfy certain eligibility requirements. Our named executive officers are eligible to participate in the 401(k) Plan on the same terms as other full-time employees. Our 401(k) Plan is intended to qualify for favorable tax treatment under Section 401(a) of the Code and contains a cash or deferred feature that is intended to meet the requirements of Section 401(k) of the Code. We provide matching contributions under the 401(k) Plan equal to 100% of the first 1% of each employee's contributions and 50% of the next 5% contributed, up to a maximum of 3.5% of the employee's annual eligible compensation. We believe that providing a vehicle for tax-deferred retirement savings though our 401(k) Plan adds to the overall desirability of our executive compensation package and further incentivizes our employees, including our named executive officers, in accordance with our compensation policies. Other than the 401(k) plan, we do not provide any qualified or non-qualified retirement or deferred compensation benefits to our employees, including our named executive officers.

All of our full-time employees, including our named executive officers, are eligible to participate in our health and welfare plans, including medical, dental, and vision benefits, short-term and long-term disability insurance, and basic life and AD&D insurance.

Employment Arrangements for Named Executive Officers

We initially entered into offer letters with each of our named executive officers in connection with their commencement of employment, which set forth the terms and conditions of their employment, including initial base salary, initial target annual bonus opportunity, initial equity awards, and eligibility to participate in our employee benefit plans generally offered to our employees. The material terms of the offer letters are summarized below.

In connection with this offering, we intend to enter into a severance plan that covers our named executive officers that will be effective as of the closing of this offering.

Current Offer Letters

Michael Nally, M.B.A.

On March 2, 2021, our stockholder, Flagship Pioneering, Inc. ("Flagship Pioneering"), entered into an offer letter with Mr. Nally (the "Nally Offer Letter"), for the position of CEO-Partner of Flagship Pioneering and Chief Executive Officer of Generate, which provides for Mr. Nally's at-will employment. Pursuant to the Nally Offer Letter, Mr. Nally is eligible to receive an annual base salary from Generate and an annual incentive bonus based on the achievement of specific objectives to be agreed to by Mr. Nally and our Board. Mr. Nally was also eligible to participate in Flagship Pioneering's employee benefit plans generally available to similarly situated employees, subject to the terms of those plans.

In addition, the Nally Offer Letter provides for initial equity awards and equity awards to be granted to Mr. Nally in connection with subsequent equity financings. For information regarding outstanding equity awards held by Mr. Nally as of December 31, 2024, see the "Outstanding Equity Awards at 2024 Fiscal Year End" table below.

Jason Silvers, M.D., J.D.

On May 1, 2022, we entered into an offer letter with Dr. Silvers (the "Silvers Offer Letter"), for the position of Chief Financial Officer, which provides for Dr. Silvers' at-will employment. Pursuant to the Silvers Offer Letter, Dr. Silvers is eligible to receive an annual base salary and an annual incentive bonus based on the achievement of specific milestones to be mutually agreed. Dr. Silvers is also eligible to participate in the employee benefit plans generally available to similarly situated employees, subject to the terms of those plans.

In addition, the Silvers Offer Letter provides for an initial equity award to be granted to Dr. Silvers. For information regarding outstanding equity awards held by Dr. Silvers as of December 31, 2024, see the "Outstanding Equity Awards at 2024 Fiscal Year End" table below.

Alexandra Snyder Charen, M.D.

On May 24, 2022, we entered into an offer letter with Dr. Snyder (the "Snyder Offer Letter") for the position of Chief Medical Officer, which provided for Dr. Snyder's at-will employment. Pursuant to the Snyder Offer Letter, Dr. Snyder was eligible to receive an annual base salary and an annual incentive bonus based on the achievement of specific milestones to be mutually agreed. The Snyder Offer Letter also provided that Dr. Snyder was eligible for reimbursement up to $4,000 per month for reasonable travel and lodging expenses incurred in commuting between Dr. Snyder's residence and our office and an additional cash amount to fully cover the income taxes on such reimbursements. Dr. Snyder was also eligible to participate in the employee benefit plans generally available to similarly situated employees, subject to the terms of those plans.

In addition, the Snyder Offer Letter provided for an initial equity award to be granted to Dr. Snyder. For information regarding outstanding equity awards held by Dr. Snyder as of December 31, 2024, see the "Outstanding Equity Awards at 2024 Fiscal Year End" table below. All unvested equity awards held by Dr. Snyder were forfeited in connection with her termination of employment in July 2025.

Outstanding Equity Awards at 2024 Fiscal Year-End

The following table sets forth information concerning outstanding equity awards held by each of our named executive officers as of December 31, 2024.

		Option Awards[1]					Stock Awards[1]	
Name	Vesting Commencement Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price ($)	Option Expiration Date	Number of Shares of Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)[2]
Michael Nally, M.B.A.	3/22/2021 [3]	3,148,359	209,891	—	0.22	5/27/2031	—	—
	3/22/2021 [4]	—	—	—	—	—	209,891	
	—	959,500	—	—	0.22	5/27/2031	—	—
	— [5]	479,750	—	479,750	0.22	5/27/2031	—	—
	9/1/2023 [6]	271,875	598,125	—	4.73	12/3/2033	—	—
	1/3/2024 [6]	150,000	650,000	—	4.77	2/28/2034	—	—
	— [7]	—	—	100,000	4.77	2/28/2034	—	—
	— [8]	—	—	100,000	4.77	2/28/2034	—	—
Jason Silvers, M.D., J.D.	7/25/2022 [3]	747,000	581,000	—	3.98	9/29/2032	—	—
	3/1/2024 [6]	75,000	325,000	—	4.77	2/8/2034	—	—
Alexandra Snyder Charen, M.D.	7/18/2022 [3]	530,437	412,563	—	3.98	9/29/2032	—	—
	6/12/2023 [6]	140,625	234,375	—	4.73	12/3/2033	—	—
	3/1/2024 [6]	75,000	325,000	—	4.77	2/8/2034	—	—

(1) All option awards and stock awards were granted under the 2019 Equity Incentive Plan, as amended (the "2019 Plan").

(2) Represents the fair market value of the shares that were unvested as of December 31, 2024. The fair market value assumes an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus.

(3) This option award vests over four years, with 25% of the shares vesting on the first anniversary of the vesting commencement date and the remaining 75% of the shares vesting in 12 equal quarterly installments thereafter, in each case subject to the named executive officer's continued service relationship through the applicable vesting date.

(4) This restricted stock award vests over four years, with 25% of the shares vesting on the first anniversary of the vesting commencement date and the remaining 75% of the shares vesting in 12 equal quarterly installments thereafter, in each case subject to the named executive officer's continued service relationship through the applicable vesting date.

(5) The unvested portion of this option award will fully vest if we enter into one or more strategic transactions (which means strategic partnerships, collaborations, technology licenses, development, marketing or other similar agreements) pursuant to which we have the right to receive, in the aggregate, at least $200,000,000 through guaranteed payments but excluding equity purchases, conditional milestones, royalties and similar payments (such payments, "Strategic Payments"), provided that any Strategic Payments credited towards satisfaction of the performance metrics applicable to the performance-based awards granted to Mr. Nally in 2024 shall not be credited towards satisfaction of the performance metrics applicable to this award. As of December 31, 2024, $100,000,000 of Strategic Payments had been credited toward the vesting of this award.

(6) This option award vests in 16 equal quarterly installments following the vesting commencement date, subject to the named executive officer's continued service relationship through the applicable vesting date.
(7) This option award vests upon our entry into one or more strategic transactions prior to December 31, 2025, pursuant to which we have the right receive in the aggregate at least $50,000,000 in Strategic Payments, excluding certain specified payments.
(8) This option award fully vests upon the Company's entry into one or more strategic transactions prior to December 31, 2025, pursuant to which we have the right receive in the aggregate at least $100,000,000 in Strategic Payments, excluding certain specified payments.

Employee Benefit and Equity Compensation Plans

2019 Equity Incentive Plan

The 2019 Plan was initially adopted by our Board and approved by our stockholders in July 2019 and was most recently amended in February 2025 to increase the number of shares reserved for issuance thereunder. Under the 2019 Plan, as amended, we have reserved for issuance an aggregate of 48,500,000 shares of our common stock. The number of shares reserved for issuance is subject to adjustment in the event of a dividend or other distribution, reorganization, merger, consolidation, combination, repurchase, recapitalization, liquidation, dissolution, or sale, transfer, exchange, or other disposition of our assets, or sale or exchange of our securities, issuance of warrants or other rights to purchase our securities, or other similar corporate transaction or event. Our Board has determined not to make any further awards under the 2019 Plan following the closing of this offering, but all outstanding awards under the 2019 Plan will continue to be governed by the 2019 Plan. In connection with this offering, we intend to adopt a new incentive equity plan under which we will grant equity-based awards following this offering, as described below under "*—2026 Equity Incentive Plan*." The following summary describes the material terms of the 2019 Plan. This summary is not a complete description of all provisions of the 2019 Plan and is qualified in its entirety by reference to the 2019 Plan, which is filed as an exhibit to the registration statement of which this prospectus is a part.

The shares of common stock underlying any awards under our 2019 Plan that expire, lapse, or are terminated, surrendered, or cancelled without having been exercised in full, or are otherwise forfeited in whole or part, in any case in a manner that results in any shares not being issued or being so reacquired by us, the unused shares covered by such Award are currently added back to the shares of common stock available for issuance under our 2019 Plan (and, following the completion of this offering, will be added back to the shares of common stock available for issuance under the 2026 Plan). Further, shares of common stock delivered to us to satisfy the applicable exercise or purchase price of an award under the 2019 Plan and/or any applicable tax withholding obligation with respect to an award under the 2019 Plan are currently added back to the shares of common stock available for issuance under our 2019 Plan (and, following the completion of this offering, will be added back to the shares of common stock available for issuance under the 2026 Plan).

Our Board has acted as administrator of the 2019 Plan. The administrator has the authority to, among other things, select, from among the individuals eligible for awards, the individuals to whom awards will be granted, make any combination of awards to participants, determine the specific terms and conditions of each award, subject to the provisions of the 2019 Plan. Persons eligible to participate in our 2019 Plan are our employees, directors, and consultants, as selected from time to time by the administrator in its discretion.

The 2019 Plan permits the granting of (1) options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Code and (2) options that do not so qualify. The option exercise price of each option is determined by the administrator but may not be less than 100% of the fair market value of the common stock on the date of grant or, in the case of an incentive stock option granted to a 10% owner, 110% of the fair market value of our common stock on the date of grant. The term of each option is fixed by the administrator and may not exceed ten years from the date of grant (or five years in the case of certain incentive stock option grants). The administrator determines at what time or times each option may be exercised.

The administrator of the 2019 Plan may award restricted shares of common stock, restricted stock units, and other awards based upon or payable in shares of common stock, subject to such conditions and restrictions as it determines.

In the event of certain corporate transactions and events, including a dividend or other distribution, reorganization, merger, consolidation, combination, repurchase, recapitalization, liquidation, dissolution, or sale, transfer, exchange, or other disposition of our assets, or sale or exchange of our securities, issuance of warrants or other rights to purchase our securities, or other similar corporate transaction or event, the administrator of the 2019 Plan may make appropriate adjustments to the maximum number of shares reserved for issuance under the 2019 Plan, the number and kind of securities subject to outstanding awards under the 2019 Plan, the repurchase or exercise price of any outstanding awards under the 2019 Plan, and the terms and condition of any outstanding awards under the 2019 Plan.

The 2019 Plan provides that in the event of certain events affecting our capitalization (including a change in control) or any change in applicable laws or accounting principles, the plan administrator may take any one or combination of actions with respect to awards under the 2019 Plan in order to prevent dilution or enlargement of benefits under the 2019 Plan, facilitate such corporate event, or give effect to such change in applicable law or accounting principle, including cancellation of awards in exchange for a payment of cash or other property, accelerating the vesting of awards, providing for the assumption, continuation, or substitution of awards by the successor or survivor corporation, if applicable, adjusting of the number and type of securities subject to awards and the terms and conditions of awards, replacing awards with other rights or property, or terminating awards.

The Board may amend or discontinue the 2019 Plan at any time, subject to stockholder approval where required by applicable law.

No awards may be granted under our 2019 Plan after the date that is ten years from the date our 2019 Plan was adopted by the Board. As described above, our Board has determined not to make any further awards under our 2019 Plan following the completion of this offering.

2026 Equity Incentive Plan

The 2026 Plan was adopted by our Board on , was approved by our stockholders on , 2026, and will become effective on the date immediately preceding the date on which the registration statement of which this prospectus is a part is declared effective by the Securities and Exchange Commission (the "SEC"). The 2026 Plan will replace the 2019 Plan. The 2026 Plan will allow us to make equity-based and cash-based incentive awards to our officers, employees, directors, and consultants. The following summary describes the material terms of the 2026 Plan. This summary is not a complete description of all provisions of the 2026 Plan and is qualified in its entirety by reference to the 2026 Plan, which will be filed as an exhibit to the registration statement of which this prospectus is a part.

Authorized Shares. We have initially reserved shares of our common stock for the issuance of awards under the 2026 Plan (the "Initial Limit"). The 2026 Plan provides that the number of shares reserved and available for issuance under the 2026 Plan will automatically increase on January 1, 2027 and each January thereafter during the term of the 2026 Plan, by % of the outstanding number of shares of our common stock on the immediately preceding December 31 or such lesser number of shares as determined by our compensation committee (the "Annual Increase"). The number of shares reserved for issuance under the 2026 Plan will be subject to adjustment in the event of a stock split, stock dividend, or other change in our capitalization.

The shares we issue under the 2026 Plan will be authorized but unissued shares or shares that we reacquire. The shares of common stock underlying any awards under the 2026 Plan and the 2019 Plan that are forfeited, cancelled, held back upon exercise or settlement of an award to satisfy the exercise price or tax withholding, reacquired by us prior to vesting, satisfied without the issuance of stock, expire, or are otherwise terminated (other than by exercise) will be added back to the shares of common stock available for issuance under the 2026 Plan. The maximum number of shares of common stock that may be issued pursuant to incentive stock options shall not exceed the Initial Limit, cumulatively increased on January 1, 2027 and on each January 1 thereafter by the lesser of the Annual Increase for such year or shares of common stock.

Non-Employee Director Compensation Limit. The grant date fair value of all awards under the 2026 Plan and all other cash compensation paid by us to any non-employee director during any one calendar year for services as a non-employee director may not exceed $; provided, however, that such amount shall be $ for the calendar year in which the applicable non-employee director is initially elected or appointed to our Board.

Plan Administration. The 2026 Plan will be administered by our compensation committee. Our compensation committee will have full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted and the number of shares subject to such awards, to make any combination of awards to participants, to accelerate at any time the exercisability or vesting of any award, and to determine the specific terms and conditions of each award, subject to the provisions of the 2026 Plan. The compensation committee is specifically authorized to exercise its discretion to reduce the exercise price of outstanding stock options and stock appreciation rights or effect the repricing of such awards through cancellation and re-grants without stockholder consent.

Eligibility. Persons eligible to participate in the 2026 Plan will be those employees, non-employee directors, and consultants selected from time to time by our compensation committee in its discretion.

Stock Options. The 2026 Plan permits the granting of both options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Code and options that do not so qualify. The option exercise price of each option will be determined by our compensation committee but may not be less than 100% of the fair market value of our common stock on the date of grant unless the option (i) is granted pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code, (ii) is granted to an individual who is not subject to United States income tax, or (iii) complies with or is exempt from Section 409A of the Code. The term of each option will be fixed by our compensation committee and may not exceed ten years from the date of grant (or five years in the case of certain incentive stock options). Our compensation committee will determine at what time or times each option may be exercised.

Stock Appreciation Rights. Our compensation committee may award stock appreciation rights under the 2026 Plan subject to such conditions and restrictions as it determines. Stock appreciation rights entitle the recipient to shares of common stock, or cash, equal to the value of the appreciation in our stock price over the exercise price. The exercise price of each stock appreciation right may not be less than 100% of the fair market value of our common stock on the date of grant unless the stock appreciation right (i) is granted pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code, (ii) is granted to an individual who is not subject to United States income tax, or (iii) complies with or is exempt from Section 409A of the Code. The term of each stock appreciation right will be fixed by our compensation committee and may not exceed ten years from the date of grant. Our compensation committee will determine at what time or times each stock appreciation right may be exercised.

Restricted Stock and Restricted Stock Units. Our compensation committee may award restricted shares of common stock and restricted stock units to participants subject to such conditions and restrictions as it determines. These conditions and restrictions may include the achievement of certain performance goals and/or continued employment or other service relationship with us through a specified vesting period.

Unrestricted Stock Awards. Our compensation committee may grant shares of common stock that are free from any restrictions under the 2026 Plan. Unrestricted stock may be granted to participants in recognition of past services or for other valid consideration and may be issued in lieu of cash compensation due to such participant.

Dividend Equivalent Rights. Our compensation committee may grant dividend equivalent rights to participants that entitle the recipient to receive credits for dividends that would be paid if the recipient had held a specified number of shares of common stock.

Cash-Based Awards. Our compensation committee may grant cash bonuses under the 2026 Plan to participants, subject to the achievement of certain performance goals.

Sale Event. The 2026 Plan provides that, upon the effectiveness of a “sale event” (as defined in the 2026 Plan), an acquirer or successor entity may assume, continue, or substitute outstanding awards under the 2026 Plan. To the extent that awards granted under the 2026 Plan are not assumed, continued, or substituted by the successor entity, the 2026 Plan and all awards granted under the 2026 Plan will terminate. In such case, except as may be otherwise provided in the relevant award agreement, all awards with time-based vesting, conditions, or restrictions will become fully vested and exercisable or nonforfeitable as of the effective time of the sale event and all awards with conditions and restrictions relating to the attainment of performance goals may become vested and exercisable or nonforfeitable in connection with the sale event in the plan administrator’s discretion or to the extent specified in the relevant award agreement. In the event of such termination, (i) individuals holding options and stock appreciation rights will be permitted to exercise any options and stock appreciation rights (to the extent exercisable) within a specified time period, as determined by the compensation committee, prior to the

sale event or (ii) we may make or provide for a payment, in cash or in kind, to participants holding vested and exercisable options and stock appreciation rights equal to the difference between the per share consideration payable to stockholders in the sale event and the exercise price of the options or stock appreciation rights; provided, that any options or stock appreciation rights with exercise prices equal to or greater than such per share consideration will be cancelled for no consideration. In addition, we may make or provide for a payment, in cash or in kind, to the participants holding other awards in an amount equal to the per share consideration payable to stockholders in the sale event multiplied by the number of vested shares of common stock under such awards.

Amendment. Our Board may amend or discontinue the 2026 Plan and our compensation committee may amend or cancel outstanding awards for purposes of satisfying changes in law or any other lawful purpose, but no such action may materially and adversely affect rights under an award without the holder's consent. Certain amendments to the 2026 Plan require the approval of our stockholders. The compensation committee is specifically authorized to exercise its discretion to reduce the exercise price of outstanding stock options and stock appreciation rights or effect the repricing of such awards through cancellation and re-grants without stockholder consent.

No awards may be granted under the 2026 Plan after the date that is ten years from the effective date of the 2026 Plan. No awards have been made under the 2026 Plan prior to the date hereof.

2026 Employee Stock Purchase Plan

The ESPP was adopted by our Board on , was approved by our stockholders on , 2026, and will become effective on the date immediately preceding the date on which the registration statement of which this prospectus is part is declared effective by the SEC. The ESPP has two components: a component intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code (the "423 Component"), and a component that is not intended to so qualify (the "Non-423 Component"). Except as otherwise provided, the Non-423 Component will be operated and administered in the same manner as the 423 Component, except where prohibited by law. The following summary describes the material terms of the ESPP. This summary is not a complete description of all provisions of the ESPP and is qualified in its entirety by reference to the ESPP, which will be filed as an exhibit to the registration statement of which this prospectus is a part.

Authorized Shares. The ESPP initially reserves and authorizes the issuance of up to a total of shares of our common stock to participating employees. The ESPP provides that the number of shares reserved and available for issuance will automatically increase on January 1, 2027 and each January 1 thereafter through January 1, 2036, by the least of (i) % of the outstanding number of shares of our common stock on the immediately preceding December 31, (ii) shares of common stock, or (iii) such number of shares of common stock as determined by the administrator of the ESPP. The number of shares reserved under the ESPP is subject to adjustment in the event of a stock split, stock dividend, or other change in our capitalization.

Eligibility. All individuals classified as employees on the payroll records of the Company or a "designated company" (as defined in the ESPP) as of the first day of the applicable offering period are eligible to participate in the ESPP, provided that the ESPP administrator may determine in advance of an offering that employees are eligible only if, as of the first day of the offering, they (a) are customarily employed by us or a designated company for more than 20 hours a week (or such greater amount determined by the ESPP administrator), (b) are customarily employed by us or a designated company for more than five months per calendar year, (c) have completed a minimum period of employment as determined by the ESPP administrator, provided such service requirement does not exceed two years of employment, and/or (d) they are not highly compensated employees. However, any employee who owns, or as a result of participation in the ESPP would own or hold, 5% or more of the total combined voting power or value of all classes of our stock will not be eligible to purchase shares of common stock under the ESPP.

Offerings. We may make one or more offerings each year to our employees to purchase shares of our common stock under the ESPP, each of which may consist of one or more purchase periods. Offerings will begin and end on the dates determined by the ESPP administrator, except that no offering will exceed 27 months in duration. Each eligible employee may elect to participate in any offering by submitting an enrollment form by the deadline established by the ESPP administrator.

Each employee who is a participant in the ESPP may purchase shares by authorizing payroll deductions at a minimum of % and up to a maximum of % of such participant's eligible compensation during an offering period (or such other minimum and maximum as determined by the administrator in advance of an offering). Unless the participating employee has previously withdrawn from the offering, such participant's accumulated payroll deductions will be used to purchase shares of our common stock on the last day of each purchase period at a price equal to % of the fair market value of the shares on the first day or the last day of the purchase period, whichever is lower, provided that no more than the number of shares of common stock determined by dividing $25,000 by the fair market value of our common stock on the first day of such offering period (or such other maximum number of shares as may be established by the administrator) may be purchased by any one employee during any purchase period. Under applicable tax rules, an employee may purchase no more than $25,000 worth of shares of our common stock, valued at the start of the offering period, under the ESPP for each calendar year during which any option granted to the employee is outstanding at any time.

The accumulated payroll deductions of any employee who is not a participant on the last day of an offering period will be refunded. An employee's rights under the ESPP terminate upon voluntary withdrawal from the plan or when the employee ceases employment with us for any reason.

Sale Event. In the case of and subject to the consummation of a "sale event" (as defined in the ESPP), the administrator of the ESPP, in its discretion, and on such terms and conditions as it deems appropriate, is authorized to take any one or more of the following actions under the ESPP or with respect to any right under the ESPP to facilitate such transactions or events: (i) provide for either (A) termination of any outstanding option in exchange for an amount of cash, if any, equal to the amount that would have been obtained upon the exercise of such option had such option been currently exercisable or (B) the replacement of such outstanding option with other options or property selected by the administrator of the ESPP in its sole discretion; (ii) provide that the outstanding options under the ESPP shall be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for similar options covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices; (iii) make adjustments in the number and type of shares of common stock (or other securities or property) subject to outstanding options under the ESPP and/or in terms and conditions of outstanding options and options that may be granted in the future; (iv) provide that the offering with respect to which an option relates will be shortened by setting a new exercise date on which such offering period will end; and (v) provide that all outstanding options shall terminate without being exercised and all amounts in the accounts of participants shall be promptly refunded.

Amendment. The ESPP may be terminated or amended by our Board at any time. An amendment that increases the number of shares of our common stock authorized under the ESPP and certain other amendments require the approval of our stockholders.

Senior Executive Cash Incentive Bonus Plan

On , our Board adopted the Senior Executive Cash Incentive Bonus Plan (the "Bonus Plan"). The Bonus Plan provides for cash bonus payments based upon Company and individual performance targets established by our compensation committee. The performance targets will be related to financial or operational measures or objectives with respect to our company ("Corporate Performance Goals"), as well as individual performance objectives. The following summary describes the material terms of the Bonus Plan. This summary is not a complete description of all provisions of the Bonus Plan and is qualified in its entirety by reference to the Bonus Plan, which will be filed as an exhibit to the registration statement of which this prospectus is a part.

Our compensation committee may select corporate performance goals from among the following: cash flow (including, but not limited to, operating cash flow and free cash flow); research and development, publication, clinical, and/or regulatory milestones; revenue; corporate revenue; earnings before interest, taxes, depreciation, and amortization; net income (loss) (either before or after interest, taxes, depreciation, and/or amortization); changes in the market price of our common stock; economic value-added; acquisitions or strategic transactions, including public or private equity or debt financings, government or other third-party grants, asset sales, royalty financings, partnership, collaboration and licensing arrangements, or a combination of these approaches; operating income (loss); return on capital, assets, equity, or investment; stockholder returns; return on sales; gross or net profit levels; productivity; expense efficiency; margins; operating efficiency; customer satisfaction; working capital; earnings (loss) per share of our common stock; sales or market shares; number of prescriptions or prescribing physicians; coverage decisions; leadership development, employee retention and recruiting, and other human resources matters; operating income; and/or net annual recurring revenue; or any other

performance goal selected by the compensation committee, any of which may be (A) measured in absolute terms or as compared to any incremental increase, (B) measured in terms of growth, (C) as compared to results of a peer group, (D) measured against the market as a whole, compared to applicable market indices, and/or (E) measured on a pre-tax or post-tax basis.

Each executive officer who is selected to participate in the Bonus Plan will have a target bonus opportunity set for each performance period. The bonus formulas will be adopted in each performance period by the compensation committee and communicated to each executive. The Corporate Performance Goals will be measured at the end of each performance period after our financial reports have been published or such other appropriate time as the compensation committee determines. If the Corporate Performance Goals and individual performance objectives are met, payments will be made as soon as practicable following the end of each performance period, but not later than 74 days after the end of the year in which such performance period ends. Subject to any rights contained in any agreement between the executive officer and us, an executive officer shall be required to be employed by us on the bonus payment date to be eligible to receive a bonus payment under the Bonus Plan. The Bonus Plan also permits the compensation committee to approve additional bonuses to executive officers in its sole discretion.

DIRECTOR COMPENSATION

The following table presents the compensation awarded to, earned by, or paid to each person who served as a non-employee member of the Board for their services to us during Fiscal Year 2024. During Fiscal Year 2024, Mr. Nally served as a member of our Board but received no additional compensation for his services as member of our Board. The compensation for Fiscal Year 2024 received by Mr. Nally as our Chief Executive Officer is presented in "*Executive Compensation—2024 Summary Compensation Table*" above.

Name	Fees Earned or Paid in Cash ($)[1]	Option Awards ($)[2] [3]	Total ($)
Geoffrey A. von Maltzahn, Ph.D.(4)	—	176,153	176,153
Noubar B. Afeyan, Ph.D.	—	176,153	176,153
Frances H. Arnold, Ph.D.	50,000	176,153	226,153
Stéphane Bancel	—	176,153	176,153
Gary P. Pisano, Ph.D.(5)	—	176,153	176,153
Rupert Vessey, B.M. B.Ch., DPhil, FRCP	—	727,501	727,501
Nancy A. Simian, M.D.	—	727,501	727,501
Jane L. Mendillo, M.B.A.	—	—	—

(1) The amounts reported represent the cash fees each director received for their services to our Board during Fiscal Year 2024.

(2) The amounts reported represent the aggregate grant date fair value of stock option awards granted to our directors in Fiscal Year 2024, computed in accordance with FASB ASC Topic 718. Such grant date fair values do not take into account any estimated forfeitures related to service-based vesting. The assumptions used in calculating the grant date fair values of the option awards reported in this column are set forth in Note 4 of our consolidated financial statements for Fiscal Year 2024, included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for these option awards and do not correspond to the actual economic value that may be received by our directors upon the exercise of the option awards or any sale of the underlying securities.

(3) As of December 31, 2024, each non-employee director held options to purchase the aggregate number of shares of our common stock as set forth in the table below. As of December 31, 2024, none of the non-employee directors held any unvested stock awards.

(4) Dr. Maltzahn resigned from our Board as of June 6, 2024.

(5) Dr. Pisano resigned from our Board as of June 5, 2025.

Name	Shares Underlying Outstanding Option Awards at Fiscal Year-End
Geoffrey A. von Maltzahn, Ph.D.	50,000
Noubar B. Afeyan, Ph.D.	50,000
Frances H. Arnold, Ph.D.	100,000
Stéphane Bancel	100,000
Gary P. Pisano, Ph.D.	500,000
Rupert Vessey, B.M. B.Ch., D.Phil., FRCP	200,000
Nancy A. Simonian, M.D.	200,000
Jane L. Mendillo, M.B.A.	200,000

Non-Employee Director Compensation Policy

In connection with this offering, we intend to adopt a non-employee director compensation policy that will become effective upon the completion of this offering and is designed to enable us to attract and retain, on a long-term basis, highly qualified non-employee directors. Under the policy, each director who is not an employee will be paid cash compensation from and after the completion of this offering, as set forth below, which amounts will be payable quarterly in arrears and prorated for partial years of service:

Board of Directors	Annual Retainer
Members	$
Additional retainer for non-executive chair	$
Audit Committee:	
Members (other than chair)	$
Retainer for chair	$
Compensation Committee:	
Members (other than chair)	$
Retainer for chair	$
Nominating and Corporate Governance Committee:	
Members (other than chair)	$
Retainer for chair	$

In addition, the non-employee director compensation policy provides that, upon initial election to our Board, each non-employee director will be granted an initial option award to purchase shares of our common stock (the "Initial Award"). The Initial Award will vest , subject to continued service through the applicable vesting date. Furthermore, on the date of each annual meeting of stockholders following the completion of this offering, each non-employee director who continues as a non-employee director following such meeting will be granted an annual option award to purchase shares of our common stock (the "Annual Award"). Each Annual Award will vest .

All outstanding equity awards granted to non-employee directors will become fully vested and exercisable upon a "sale event" (as defined in the 2026 Plan).

The aggregate amount of compensation, including both equity compensation and cash compensation, paid to any non-employee director for service as a non-employee director in a calendar year period will not exceed $ (or $ for the calendar year in which the applicable non-employee director is initially elected or appointed to our Board).

We will reimburse all reasonable out-of-pocket expenses incurred by non-employee directors in attending meetings of the Board and committees thereof.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

In addition to the compensation arrangements, including employment, termination of employment and change in control arrangements, and indemnification arrangements discussed, when required, in the sections titled "*Management*," "*Director Compensation*" and "*Executive Compensation*" and the registration rights described in the section titled "*Description of Capital Stock—Registration Rights*," the following is a description of all transactions since January 1, 2023 and each currently proposed transaction in which:

- we have been or are to be a participant;
- the amounts involved exceeded or will exceed the lesser of $120,000 or 1% of the average of our total assets at the year-end for the last two completed fiscal years; and
- any of our directors, executive officers or holders of more than 5% or more of our outstanding capital stock, or any immediate family member of, or person sharing the household with, any of these individuals or entities or affiliated entities, had or will have a direct or indirect material interest.

Series C Preferred Stock Financing

Between May 9, 2023 and January 21, 2025, we issued and sold an aggregate of 33,704,613 shares of our Series C convertible preferred stock, par value $0.001 per share (the "Series C preferred stock"), at a purchase price of $11.85 per share, for an aggregate purchase price of approximately $399.4 million.

Each outstanding share of Series C preferred stock will convert into one share of common stock immediately prior to the completion of this offering. The following table summarizes the shares of our Series C preferred stock issued to our related parties:

Purchasers	Shares of Series C Preferred Stock	Total Purchase Price
Flagship Funds(1)	5,907,170	$ 69,999,965

(1) Consists of (i) 2,531,644 shares of Series C preferred stock held by Flagship Pioneering Fund VII, L.P., (ii) 1,265,822 shares of Series C preferred stock held by Flagship Pioneering Special Opportunities Fund II, L.P. and (iii) 2,109,704 shares of Series C preferred stock held by FPN II, L.P. The Flagship Funds beneficially own more than 5% of our outstanding shares of common stock. Noubar Afeyan, Ph.D., Paul Parker, M.B.A., and Rupert Vessey, B.M. B.Ch., D.Phil., FRCP, are members of our Board and affiliates of the Flagship Funds. In addition, Geoffrey A. von Maltzahn, Ph.D., and Gary P. Pisano, Ph.D., were members of our Board at the time of the Series C preferred stock financing and are affiliates of the Flagship Funds. Additional details regarding these stockholders and their equity holdings are included in this prospectus under the section "*Principal Stockholders*."

Flagship Agreements

Collaboration Agreement with PMCo

On January , 2026, we entered into an amended and restated collaboration agreement (the "PMCo Agreement"), with Pioneering Medicines 02, Inc. ("PMCo"), an affiliate of Flagship Pioneering, Inc. ("Flagship Pioneering"). For the years ended December 31, 2025, 2024 and 2023, we received from PMCo a net amount of $, $7.0 million and $3.2 million for research and development expenses. For more information regarding the PMCo Agreement, see "*Business—License and Collaboration Agreements—Collaboration Agreement with PMCo*."

License Agreement with Flagship

In August 2021, we entered into an agreement (the "Flagship Agreement"), with Flagship Pioneering Innovations VI, LLC ("Flagship"), an affiliate of Flagship Pioneering, pursuant to which we (i) irrevocably and unconditionally assigned to Flagship all of our right, title and interest in and to certain foundational patent rights conceived prior to our launch, which is defined as the closing of our Series B financing, and our improvements to such patent rights that cannot be practiced without infringing the foregoing patent rights (such patent rights and improvements, the "Foundational IP"), and (ii) obtained an exclusive, worldwide, royalty-bearing, sublicensable, transferable license from Flagship under such Foundational IP to develop, manufacture and commercialize any product or process or component thereof in the licensed field of human therapeutics and vaccines that would, absent the license granted to us by Flagship, infringe at least one valid claim of the Foundational IP. We utilize the rights granted to us by Flagship Pioneering under the Flagship Agreement in connection with certain aspects of the Generate Platform and GB-0895. To date, there have been no amounts paid or received by us under the Flagship Agreement. For more information regarding the Flagship Agreement, see "*Business—License and Collaboration Agreements—License Agreement with Flagship*."

Managerial Agreement with Flagship Pioneering

In August 2018, we entered into a ten-year management service agreement (the "Flagship Managerial Agreement") with Flagship Pioneering to provide management services, including accounting, human resources, information technology, legal, and consultation. We also agreed to reimburse Flagship Pioneering for certain expenses, including insurance and benefits, partner and related fees, and software licenses, incurred on our behalf. For the years ended December 31, 2025, 2024 and 2023, we recognized expense related to Flagship Pioneering of $, $1.0 million and $2.0 million, respectively, in management services fees and other reimbursements. The Flagship Managerial Agreement will be terminated in connection with the consummation of this offering.

Shared Space Agreement with Cellarity

In July 2022, we entered into a shared space operating agreement, as amended in May 2024, with Cellarity, Inc. ("Cellarity"), an affiliate of Flagship Pioneering, to use a vivarium space, along with other companies affiliated with Flagship Pioneering. We pay Cellarity a monthly operating fee for using the vivarium and obtaining various services; the shared cost is variable depending on the actual usage. During the years ended December 31, 2025, 2024 and 2023, we recognized expense related to Cellarity of $, $0.6 million and $0.7 million, respectively, reflecting upfront payments and monthly operating fees.

Employment Arrangements

We have entered into employment agreements with certain of our named executive officers, and granted stock options to our named executive officers and certain of our directors, as more fully described in "*Executive Compensation*" and "*Director Compensation*."

Agreements with our Stockholders

In connection with our preferred stock financings, we entered into an investor rights agreement, a right of first refusal and co-sale agreement, and voting agreement, in each case, with the purchasers of our preferred stock. Our amended and restated right of first refusal and co-sale agreement ("ROFR Agreement") provides for rights of first refusal and co-sale and drag along rights in respect of sales by certain holders of our capital stock. Our amended and restated voting agreement, as amended ("Voting Agreement"), contains provisions with respect to the election of our Board and its composition. The rights under each of the ROFR Agreement and Voting Agreement will terminate upon the closing of this offering.

Our amended and restated investors' rights agreement ("Investor Rights Agreement") provides certain holders of our preferred stock with a participation right to purchase their pro rata share of new securities that we may propose to sell and issue, subject to certain exceptions. Such participation right will terminate upon the closing of this offering. The Investor Rights Agreement further provides certain holders of our capital stock with the right to demand that we file a registration statement, subject to certain limitations, and to request that their shares be covered by a registration statement that we are otherwise filing. See the section titled "*Description of Capital Stock—Registration Rights*" appearing elsewhere in this prospectus, for additional information regarding such registration rights.

Indemnification Agreements

Our amended and restated certificate of incorporation will contain provisions limiting the liability of directors and officers, and our amended and restated bylaws will provide that we will indemnify each of our directors and officers to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide our Board with discretion to indemnify our employees and other agents when determined appropriate by the board. In addition, we have entered into or intend to enter into an indemnification agreement with each of our directors and executive officers, which will require us to indemnify them. For more information regarding these agreements, see the section titled "*Management—Limitations on Liability and Indemnification*."

Policies and Procedures for Transactions with Related Persons

Prior to the completion of this offering, we intend to adopt a written policy that our executive officers, directors, nominees for election as a director, beneficial owners of more than 5% of any series of our common stock and any members of the immediate family of any of the foregoing persons are not permitted to enter into a related person transaction with us without the approval or ratification of our Board or our audit committee. Any request for us to enter into a transaction with an executive officer, director, nominee for election as a director, beneficial owner of more than 5% of any series of our common stock or any member of the immediate family of any of the foregoing persons, in which the amount involved exceeds $120,000 (or, if less, 1% of the average of our total assets in a fiscal year) and such person would have a direct or indirect interest, must be presented to our Board or our audit committee for review, consideration and approval. In approving or rejecting any such proposal, our Board or our audit committee is to consider the material facts of the transaction, including whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third-party under the same or similar circumstances and the extent of the related person's interest in the transaction.

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding beneficial ownership of our capital stock as of by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our common stock;
- each of our directors;
- each of our named executive officers; and
- all of our current executive officers and directors as a group.

We have determined beneficial ownership in accordance with the rules of the SEC. Under these rules, beneficial ownership includes any shares of common stock as to which the individual or entity has sole or shared voting power or investment power. Unless otherwise indicated below, to our knowledge the persons and entities named in the table have sole voting and sole investment power with respect to all shares that they beneficially owned, subject to community property laws where applicable. We have deemed shares of common stock subject to options that are currently exercisable or exercisable within 60 days of , to be outstanding and to be beneficially owned by the person holding the option for the purpose of computing the percentage ownership of that person but have not treated them as outstanding for the purpose of computing the percentage ownership of any other person.

Applicable percentage ownership before the offering is based on an aggregate of shares of common stock (which includes shares of restricted common stock) deemed to be outstanding as of , after giving effect to the automatic conversion of all outstanding shares of preferred stock into shares of common stock immediately prior to the completion of this offering, and assuming an initial public offering price of $ per share, which is the midpoint of the offering range set forth on the cover page of this prospectus.

Applicable percentage ownership after the offering is based on shares of common stock assumed to be outstanding immediately after the completion of this offering (including the sale of shares of common stock in this offering and assuming no exercise of the underwriters' option to purchase additional shares).

Unless otherwise indicated, the address for each beneficial owner listed in the table below is c/o Generate Biomedicines, Inc., 101 South Street, Suite 900, Somerville, MA 02143.

	Before Offering		After Offering	
Name of Beneficial Owner	**Number of Shares Beneficially Owned**	**Percentage of Shares Beneficially Owned**	**Number of Shares Beneficially Owned**	**Percentage of Shares Beneficially Owned**
5% or Greater Shareholders:				
Entities affiliated with Flagship Funds(1)				
Named Executive Officers and Directors:				
Michael Nally, M.B.A., *Chief Executive Officer, President and Director*(2)				
Jason Silvers, M.D., J.D., *Chief Financial Officer*(3)				
Alexandra Snyder Charen, M.D., *former Chief Medical Officer*(4)				
Noubar Afeyan, Ph.D.(5)				
Frances H. Arnold, Ph.D.(6)				
Stéphane Bancel, M.B.A.(7)				
Marsha H. Fanucci, M.B.A.(8)				
Jane L. Mendillo, M.B.A.(9)				
Paul Parker, M.B.A.(10)				
Nancy A. Simonian, M.D.(11)				
Rupert Vessey, B.M. B.Ch., D.Phil., FRCP(12)				
All executive officers and directors as a group (13 persons)(13)				

(1) Consists of (i) shares of common stock held by Flagship VentureLabs VI LLC ("VentureLabs VI"), (ii) shares of common stock issuable upon the conversion of Series A Preferred stock held by Flagship Pioneering Fund VI, L.P. ("Flagship Fund VI"), (iii) shares of common stock issuable upon the conversion of Series B Preferred stock held by Flagship Fund VI, (iv) shares of common stock issuable upon the conversion of Series B Preferred stock held by Flagship Pioneering Special Opportunities Fund II, L.P. ("Flagship Opportunities Fund II"), (v) shares of common stock issuable upon the conversion of Series C Preferred stock held by Flagship Opportunities Fund II, (vi) shares of common stock issuable upon the conversion of Series A Preferred stock held by Nutritional Health LTP Fund, L.P. ("Nutritional LTP"), (vii) shares of common stock issuable upon the conversion of Series A Preferred stock held by Flagship Pioneering Fund VII, L.P. ("Flagship Fund VII"), (viii) shares of common stock issuable upon the conversion of Series B Preferred stock held by Flagship Fund VII, (ix) shares of common stock issuable upon the conversion of Series C Preferred stock held by Flagship Fund VII, (x) shares of common stock issuable upon the conversion of Series B Preferred stock held by FPN II, L.P. ("FPN II Fund" and together with VentureLabs VI, Flagship Fund VI, Flagship Opportunities Fund II, Flagship Fund VII, and Nutritional LTP, the "Flagship Funds"), (xi) shares of common stock issuable upon the conversion of Series C Preferred stock held by FPN II Fund. Flagship Fund VI is a member of VentureLabs VI. VentureLabs VI Manager LLC ("VentureLabs VI Manager") is the manager of VentureLabs VI. Flagship Pioneering, Inc. ("Flagship Pioneering") is the manager of VentureLabs VI Manager. The General Partner of Flagship Fund VI is Flagship Pioneering Fund VI General Partner LLC ("Flagship VI GP"). The General Partner of Flagship Opportunities Fund II is Flagship Pioneering Special Opportunities Fund II General Partner LLC ("Flagship Opportunities Fund II GP"). The General Partner of Flagship Fund VII is Flagship Pioneering Fund VII General Partner LLC ("Flagship VII GP"). The general partner of FPN II Fund is FPN General Partner LLC ("FPN GP"). The general partner of Nutritional LTP is Nutritional Health LTP Fund General Partner LLC ("Nutritional LTP GP"). The manager of Flagship VI GP, Flagship Opportunities Fund II GP, Flagship VII GP, Nutritional LTP GP, and FPN GP is Flagship Pioneering (together with VentureLabs VI Manager, Flagship VII GP, Flagship VI GP, Flagship Opportunities Fund II GP and FPN GP, the "Flagship General Partners"). Noubar B. Afeyan, Ph.D., is the sole Director and shareholder of Flagship Pioneering and may be deemed to have voting and investment control over all the shares held by the Flagship Funds. None of the Flagship General Partners nor Dr. Afeyan directly own any of the shares held by the Flagship Funds, and each of the Flagship

General Partners and Dr. Afeyan disclaims beneficial ownership of such shares except to the extent of its or his pecuniary interest therein. The mailing address of the Flagship Funds is 55 Cambridge Parkway, Suite 800E, Cambridge, MA 02142.

(2) Consists of (i) shares of common stock held by MTN 2024 GST Trust, (ii) shares of common stock held by MTN 2024 GRAT, (iii) shares of common stock, of which shares are shares of restricted common stock, held by Mr. Nally and (iv) shares of common stock subject to options exercisable within 60 days of .

(3) Consists of (i) shares of restricted common stock and (ii) shares of common stock subject to options exercisable within 60 days of .

(4) Consists of (i) shares of common stock and (ii) shares of common stock subject to options exercisable within 60 days of .

(5) Consists of shares of common stock subject to options exercisable within 60 days of .

(6) Consists of shares of common stock subject to options exercisable within 60 days of .

(7) Consists of shares of common stock subject to options exercisable within 60 days of .

(8) Consists of shares of common stock subject to options exercisable within 60 days of .

(9) Consists of shares of common stock subject to options exercisable within 60 days of .

(10) Consists of shares of common stock subject to options exercisable within 60 days of .

(11) Consists of shares of common stock subject to options exercisable within 60 days of .

(12) Consists of shares of common stock subject to options exercisable within 60 days of .

(13) Consists of (i) shares of common stock, of which shares are shares of restricted common stock and (ii) shares of common stock subject to options exercisable within 60 days of .

DESCRIPTION OF CAPITAL STOCK

General

The following description of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified by reference to the amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, and the amended and restated bylaws, which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part. Copies of these documents have been filed with the SEC as exhibits to our registration statement, of which this prospectus forms a part. The descriptions of the common stock and preferred stock reflect changes to our capital structure that will be in effect on the completion of this offering.

Upon the filing of our amended and restated certificate of incorporation and the completion of this offering, our authorized capital stock will consist of shares of common stock, par value $0.001 per share, and shares of preferred stock, par value $0.001 per share, all of which shares of preferred stock will be undesignated.

As of December 31, 2025, there were shares of common stock (which includes shares of restricted common stock subject to repurchase) outstanding and held of record by stockholders. This amount assumes the conversion of all outstanding shares of our preferred stock into common stock, which will occur immediately prior to the completion of this offering.

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders. The holders of our common stock do not have any cumulative voting rights. Holders of our common stock are entitled to receive ratably any dividends declared by the Board out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Our common stock has no preemptive rights, conversion rights or other subscription rights or redemption or sinking fund provisions.

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding preferred stock. The shares to be issued by us in this offering will be, when issued and paid for, validly issued, fully paid and non-assessable.

Preferred Stock

Immediately prior to the completion of this offering, all outstanding shares of our preferred stock will be converted into shares of our common stock. Upon the consummation of this offering, our Board will have the authority, without further action by our stockholders, to issue up to shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our company or other corporate action. Immediately after consummation of this offering, no shares of preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock.

Stock Options

As of December 31, 2025, shares of common stock were issuable upon the exercise of outstanding stock options under the 2019 Plan, at a weighted-average exercise price of $ per share; and shares of our common stock were reserved for future issuance under the 2026 Plan, which will become effective once the registration statement of which this prospectus forms a part is declared effective, as well as any future automatic annual increases in the number of shares of common stock reserved for issuance under the 2026 Plan, and any shares underlying outstanding stock awards granted under the 2019 Plan, that expire or are repurchased, forfeited, cancelled or withheld. For additional

information regarding terms of our equity incentive plans, see the section titled "*Executive Compensation —Employee Benefit and Equity Compensation Plans*."

Registration Rights

Upon the completion of this offering and subject to the lock-up agreements entered into in connection with this offering and federal securities laws, certain holders of shares of our common stock, including those shares of our common stock that will be issued upon the conversion of our preferred stock in connection with this offering, will initially be entitled to certain rights with respect to registration of such shares under the Securities Act. These shares are referred to as registrable securities. The holders of these registrable securities possess registration rights pursuant to the terms of our amended and restated investors' rights agreement and are described in additional detail below. The registration of shares of our common stock pursuant to the exercise of the registration rights described below would enable the holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective. We will pay all registration expenses, other than underwriting discounts, selling commissions and stock transfer taxes, of the shares registered pursuant to the demand, piggyback and Form S-3 registrations described below.

Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions and limitations, to limit the number of shares the holders may include. The demand, piggyback and Form S-3 registration rights described below will expire no later than four years after the completion of this offering.

Form S-1 Registration Rights

Upon the completion of this offering, certain holders of our common stock, including those issuable upon the conversion of shares of our preferred stock upon completion of this offering, will be entitled to certain demand registration rights. At any time beginning 180 days after the completion of this offering, the holders of a majority of registrable securities then outstanding may request that we register all or a portion of their shares on Form S-1 if the anticipated aggregate offering price of the shares offered would exceed $10 million. With certain exceptions, we are not required to effect the filing of a registration statement during the period starting with the date of the filing of, and ending on a date 60 days following the effective date of the registration statement for this offering. We will not be required to effect more than two registrations pursuant to this provision of our amended and restated investors' rights agreement.

Piggyback Registration Rights

In connection with this offering, certain holders of our common stock, including those issuable upon the conversion of shares of our preferred stock upon completion of this offering, were entitled to, and the necessary percentage of holders waived, their rights to notice of this offering and to include their shares of registrable securities in this offering. After this offering, in the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, the holders of these shares will be entitled to certain piggyback registration rights allowing the holder to include their shares in such registration, subject to certain marketing and other limitations.

Form S-3 Registration Rights

Upon the completion of this offering, certain holders of our common stock, including those issuable upon the conversion of shares of our preferred stock upon completion of this offering, will be entitled to certain Form S-3 registration rights. Holders of at least 30% of registrable securities then outstanding can make a request that we register their shares on Form S-3 if we are qualified to file a registration statement on Form S-3 and if the anticipated aggregate offering price of the shares offered would exceed $5 million. We will not be required to effect more than two registrations on Form S-3 within any twelve-month period pursuant to this provision of our amended and restated investors' rights agreement. The right to have such shares registered on Form S-3 is further subject to other specified conditions and limitations.

Expiration of Registration Rights

The demand registration rights and short-form registration rights granted under the investor rights agreement will terminate on the earliest of (i) the closing of a "Deemed Liquidation Event," as such term is defined in our certificate of incorporation (as currently in effect), (ii) the fifth anniversary of the completion of this offering and (iii) such time after consummation of this offering as SEC Rule 144 or another similar

exemption under the Securities Act is available for the sale of all of the securities subject to such registration rights without limitation during a three-month period without registration.

Anti-Takeover Effects of Our Certificate of Incorporation and Bylaws and Delaware Law

Our amended and restated certificate of incorporation and amended and restated bylaws will include a number of provisions that may have the effect of delaying, deferring or preventing another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our Board rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Board Composition and Filling Vacancies

Our amended and restated certificate of incorporation will provide for the division of our Board into three classes serving staggered three-year terms, with one class being elected each year. Our amended and restated certificate of incorporation also will provide that directors may be removed only for cause and then only by the affirmative vote of the holders of two-thirds or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our Board, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. The classification of directors, together with the limitations on removal of directors and treatment of vacancies, has the effect of making it more difficult for stockholders to change the composition of our Board.

No Written Consent of Stockholders

Our amended and restated certificate of incorporation will provide that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our amended and restated bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

Meetings of Stockholders

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that only a majority of the members of our Board then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our amended and restated bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance Notice Requirements

Our amended and restated bylaws will establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our amended and restated bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting.

Amendment to Certificate of Incorporation and Bylaws

Any amendment to our amended and restated certificate of incorporation must first be approved by a majority of our Board, and if required by law or our amended and restated certificate of incorporation, must thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, board composition and limitation of liability must be approved by not less than two-thirds of the outstanding shares entitled to vote on the amendment, and not less than two-thirds of the outstanding shares of each class entitled to vote thereon as a class. Our amended and restated bylaws may be amended by the affirmative vote of a majority of the directors then in office, subject to any limitations set forth in the amended and restated bylaws; and

may also be amended by the affirmative vote of a majority of the outstanding shares entitled to vote on the amendment, voting together as a single class, except that the amendment of the provisions relating to notice of stockholder business and nominations and special meetings must be approved by not less than two-thirds of the outstanding shares entitled to vote on the amendment, and not less than two-thirds of the outstanding shares of each class entitled to vote thereon as a class, or, if our Board recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

Undesignated Preferred Stock

Our amended and restated certificate of incorporation will provide for authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our Board to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our Board were to determine that a takeover proposal is not in the best interests of our stockholders, our Board could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our amended and restated certificate of incorporation will grant our Board broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Section 203 of the Delaware General Corporation Law

Upon completion of this offering, we will be subject to the provisions of Section 203 of the Delaware General Corporation Law (the "DGCL"). In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, our Board approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder; or
- at or after the time the stockholder became interested, the business combination was approved by our Board and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, lease, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Choice of Forum

Our amended and restated bylaws will provide that the Court of Chancery of the State of Delaware is the sole and exclusive forum for the following claims or causes of action under the Delaware statutory or common law: (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of, or a claim based on, a breach of a fiduciary duty owed by any of our current or former directors, officers or other employees or stockholders to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL or our amended and restated certificate of incorporation or amended and restated bylaws (including the interpretation, validity or enforceability thereof) or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware or (iv) any action asserting a claim governed by the internal affairs doctrine.

However, Section 27 of the Exchange Act creates exclusive federal jurisdiction over all claims brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. Consequently, this choice of forum provision would not apply to claims or causes of action brought to enforce a duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction or the Securities Act. Moreover, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all claims brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder.

In addition, our amended and restated bylaws will provide that, unless we consent in writing to the selection of an alternative forum, to the fullest extent permitted by law, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause or causes of action arising under the Securities Act, including all causes of action asserted against any defendant to such complaint. For the avoidance of doubt, this provision is intended to benefit and may be enforced by us, our officers and directors, the underwriters to any offering giving rise to such complaint, and any other professional entity whose profession gives authority to a statement made by that person or entity and who has prepared or certified any part of the documents underlying the offering.

While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions, and there can be no assurance that such provisions will be enforced by a court in those other jurisdictions. We note that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder.

Additionally, our amended and restated bylaws will provide that any person or entity holding, owning or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions.

Limitations on Liability and Indemnification

See the section titled "*Management—Limitations on Liability and Indemnification*" appearing elsewhere in this prospectus.

Exchange Listing

Our common stock is currently not listed on any securities exchange. We intend to apply to have our common stock approved for listing on Nasdaq under the symbol "GENB."

Transfer Agent and Registrar

On the completion of this offering, the transfer agent and registrar for our common stock will be Computershare Trust Company, N.A. The transfer agent's address is 150 Royall Street, Suite 101, Canton, MA 02021.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock. Future sales of substantial amounts of our common stock, including shares issued on the exercise of outstanding options, in the public market after this offering, or the possibility of these sales or issuances occurring, could adversely affect the prevailing market price for our common stock or impair our ability to raise equity capital. Although we intend to apply to list our common stock on Nasdaq, we cannot assure you that there will be an active public market for our common stock.

Following the completion of this offering, based on our shares outstanding as of December 31, 2025, a total of shares of common stock will be outstanding, assuming no exercise of the underwriters' option to purchase additional shares and no exercise of outstanding options or warrants. Of the outstanding shares, all of the shares sold in this offering will be freely tradable.

All remaining shares of common stock held by existing stockholders immediately prior to the completion of this offering will be "restricted securities" as such term is defined in Rule 144. These restricted securities were issued and sold by us, or will be issued and sold by us, in private transactions and are eligible for public sale only if registered under the Securities Act or if they qualify for an exemption from registration under the Securities Act, including the exemptions provided by Rule 144 or Rule 701, summarized below.

Rule 144

In general, under Rule 144 as currently in effect, once we have been subject to public company reporting requirements of Section 13 or Section 15(d) of the Exchange Act for at least 90 days, an eligible stockholder is entitled to sell such shares without complying with the manner of sale, volume limitation or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. To be an eligible stockholder under Rule 144, such stockholder must not be deemed to have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and must have beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144, subject to the expiration of the lock-up agreements described below.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell shares on expiration of the lock-up agreements described below. Beginning 90 days after the date of this prospectus, within any three-month period, such stockholders may sell a number of shares that does not exceed the greater of:

- 1% of the number of shares of common stock then outstanding, which will equal approximately shares immediately after this offering, assuming no exercise of the underwriters' option to purchase additional shares of common stock from us; or
- the average weekly trading volume of our common stock on Nasdaq during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

Rule 701

Rule 701 under the Securities Act ("Rule 701") generally allows a stockholder who was issued shares under a written compensatory plan or contract and who is not deemed to have been an affiliate of our company during the immediately preceding 90 days, to sell these shares in reliance on Rule 144, but without being required to comply with the public information, holding period, volume limitation or notice provisions of Rule 144. Rule 701 also permits affiliates of our company to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. All holders of Rule 701 shares, however, are required by that rule to wait until 90 days after the date of this prospectus before selling those shares under Rule 701, subject to the expiration of the lock-up agreements described below.

Form S-8 Registration Statements

We intend to file one or more registration statements on Form S-8 under the Securities Act with the SEC to register the offer and sale of shares of our common stock that are issuable under the 2019 Plan, the 2026 Plan and the ESPP. These registration statements will become effective immediately upon filing. Shares covered by these registration statements will then be eligible for sale in the public markets, subject to vesting restrictions, any applicable lock-up agreements described below, and Rule 144 limitations applicable to affiliates.

Lock-Up Arrangements

We, all of our directors and executive officers, and the holders of substantially all of our capital stock and securities convertible into or exchangeable for our capital stock have entered into lock-up agreements with the underwriters and/or are subject to market standoff agreements or other agreements with us, which prevents them from selling any of our common stock or any securities convertible into or exercisable or exchangeable for common stock for a period of not less than 180 days from the date of this prospectus without the prior written consent of Goldman Sachs & Co. LLC and Morgan Stanley & Co, LLC, subject to certain exceptions. See the section titled "*Underwriting*" appearing elsewhere in this prospectus for more information.

Registration Rights

Upon completion of this offering, certain holders of our securities will be entitled to various rights with respect to registration of their shares under the Securities Act. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration. See the section titled "*Description of Capital Stock—Registration Rights*" appearing elsewhere in this prospectus for more information.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES FOR NON-U.S. HOLDERS

The following discussion is a summary of material U.S. federal income tax consequences to non-U.S. holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering. This discussion is based on the Internal Revenue Code of 1986, as amended (the "Code"), Treasury Regulations promulgated thereunder, published rulings and administrative pronouncements of the U.S. Internal Revenue Service (the "IRS"), and judicial decisions, all as in effect on the date hereof. These authorities are subject to differing interpretations and may change, possibly with retroactive effect, resulting in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the IRS with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS or a court will agree with such statements and conclusions.

This discussion is limited to non-U.S. holders who purchase our common stock pursuant to this offering and who hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion is not a complete analysis of all potential U.S. federal income tax consequences relating thereto, does not address the potential application of the Medicare contribution tax on net investment income, the alternative minimum tax, or the special tax accounting rules under Section 451(b) of the Code, and also does not address any U.S. federal non-income tax consequences, such as estate or gift tax consequences, or any tax consequences arising under any state, local or non-U.S. tax laws. This discussion does not address all of the U.S. federal income tax consequences that may be relevant to a non-U.S. holder in light of such non-U.S. holder's particular circumstances. This discussion also does not consider any specific facts or circumstances that may be relevant to non-U.S. holders subject to special rules under the U.S. federal income tax laws, including:

- certain former citizens, or long-term residents of the United States;
- partnerships or other entities or arrangements treated as pass-through or disregarded entities for U.S. federal income tax purposes (and investors therein);
- "controlled foreign corporations";
- "passive foreign investment companies";
- corporations that accumulate earnings to avoid U.S. federal income tax;
- banks, mutual funds, financial institutions, investment funds, insurance companies, brokers, dealers or traders in stock, securities, commodities or currencies;
- tax-exempt organizations and governmental organizations;
- tax-qualified retirement plans;
- persons who acquire our common stock through the exercise of an option or otherwise as compensation;
- qualified foreign pension funds as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds;
- persons that own, or have owned, actually or constructively, more than 5% of our common stock;
- persons who have elected to mark securities to market; and
- persons holding our common stock as part of a hedging or conversion transaction or straddle, or synthetic security or a constructive sale, or other risk reduction strategy or integrated investment.

If an entity or arrangement that is classified as a partnership for U.S. federal income tax purposes holds our common stock, the U.S. federal income tax treatment of a partner in the partnership generally will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Partnerships holding our common stock and the partners in such partnerships are urged to consult their tax advisors about the particular U.S. federal income tax consequences to them of owning and disposing of our common stock.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TAX ADVICE. PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR U.S. FEDERAL INCOME TAX CONSEQUENCES TO THEM OF ACQUIRING, OWNING AND DISPOSING OF OUR COMMON STOCK, AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL OR NON-U.S. TAX LAWS AND ANY OTHER U.S. FEDERAL TAX LAWS OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of Non-U.S. Holder

For purposes of this discussion, a non-U.S. holder is any beneficial owner of our common stock that is for U.S. federal income tax purposes:

- a non-resident alien individual;
- a corporation or any organization taxable as a corporation for U.S. federal income taxes that is not created or organized under the laws of the United States, any state thereof, or the District of Columbia; or
- a foreign trust or estate, the income of which is not subject to U.S. federal income tax on a net income basis.

Distributions on Our Common Stock

As described under "*Dividend Policy*," we do not currently anticipate declaring or paying, for the foreseeable future, any distributions on our capital stock. However, if we were to distribute cash or other property on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will then constitute a return of capital and will first be applied against and reduce a holder's tax basis in our common stock, but not below zero. Any excess will be treated as gain realized on the sale or other disposition of our common stock and will be treated as described under "*—Gain on Disposition of Our Common Stock*" below.

Subject to the discussions below regarding effectively connected income, backup withholding and FATCA (as defined below), dividends paid to a non-U.S. holder of our common stock generally will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends or such lower rate specified by an applicable income tax treaty. To receive the benefit of a reduced treaty rate, a non-U.S. holder must furnish to us or our withholding agent with a timely and valid IRS Form W-8BEN (in the case of individuals) or IRS Form W-8BEN-E (in the case of entities), or other appropriate form, certifying such holder's qualification for the reduced rate. This certification must be provided to us or our withholding agent before the payment of the dividends and must be updated periodically. If the non-U.S. holder holds our common stock through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our withholding agent, either directly or through other intermediaries.

If a non-U.S. holder holds our common stock in connection with the conduct of a trade or business in the United States, and dividends paid on our common stock are effectively connected with such holder's U.S. trade or business (and, if required by an applicable tax treaty, are attributable to such holder's permanent establishment or fixed base in the United States), such non-U.S. holder generally will be exempt from U.S. federal withholding tax. To claim the exemption, the non-U.S. holder generally must furnish a valid IRS Form W-8ECI (or applicable successor form), certifying that the dividends are effectively connected with the non-U.S. Holder's conduct of a trade or business within the United States to the applicable withholding agent.

However, any such effectively connected dividends paid on our common stock generally will be subject to U.S. federal income tax on a net income basis at the regular U.S. federal income tax rates in the same manner as if such holder were a resident of the United States. A non-U.S. holder that is a corporation also may be subject to an additional branch profits tax equal to 30% (or such lower rate specified by an applicable income tax treaty) of its effectively connected dividends, as adjusted for certain items.

Non-U.S. holders that do not provide the required certification on a timely basis, but that qualify for a reduced treaty rate, may obtain a refund or credit of any excess amounts withheld by timely filing an

appropriate claim with the IRS. Non-U.S. holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

Gain on Disposition of Our Common Stock

Subject to the discussions below regarding backup withholding and FATCA (as defined below), a non-U.S. holder generally will not be subject to U.S. federal income tax on any gain realized on the sale or other taxable disposition of our common stock, unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a trade or business in the United States and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States;
- the non-U.S. holder is a nonresident alien individual who is present in the United States for a period or periods aggregating 183 days or more during the taxable year of the disposition, and certain other requirements are met; or
- our common stock constitutes a "United States real property interest" by reason of our status as a United States real property holding corporation ("USRPHC") for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding the disposition or the non-U.S. holder's holding period for our common stock, and our common stock is not "regularly traded" on an "established securities market" within the meaning of applicable Treasury Regulations, during the calendar year in which the sale or other disposition occurs.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular U.S. federal income tax rates in the same manner as if such holder were a resident of the United States. A non-U.S. holder that is a corporation also may be subject to an additional branch profits tax equal to 30% (or such lower rate specified by an applicable income tax treaty) of its effectively connected earnings and profits for the taxable year, as adjusted for certain items.

Gain described in the second bullet point above will be subject to U.S. federal income tax at a flat 30% rate (or such lower rate specified by an applicable income tax treaty), but may be offset by certain U.S.-source capital losses of the non-U.S. holder (even though the individual is not considered a resident of the United States), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses.

Determining whether we are a USRPHC depends on the fair market value of our United States real property interests relative to the fair market value of our worldwide real property interests and our other trade or business assets. We believe that we are not currently and we do not anticipate becoming a USRPHC for U.S. federal income tax purposes, although there can be no assurance we have not been, are not currently or will not in the future become a USRPHC. Even if we are treated as a USRPHC, gain realized by a non-U.S. holder on a disposition of our common stock will not be subject to U.S. federal income tax so long as (1) the non-U.S. holder owned, directly, indirectly and constructively, no more than 5% of our common stock at all times within the shorter of (a) the five-year period preceding the disposition or (b) the holder's holding period and (2) our common stock is "regularly traded" on an "established securities market," within the meaning of applicable U.S. Treasury Regulations. There can be no assurance that our common stock qualifies as regularly traded on an established securities market for purposes of the rules described above. Prospective investors are encouraged to consult their own tax advisors regarding the possible consequences to them if we have been, are or were to become a USRPHC.

Non-U.S. holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Annual reports are required to be filed with the IRS and provided to each non-U.S. holder indicating the amount of distributions on our common stock paid to such holder and the amount of any tax withheld with respect to those distributions. These information reporting requirements apply even if no withholding was required because the distributions were effectively connected with the holder's conduct of a U.S. trade or business, or withholding was reduced or eliminated by an applicable income tax treaty. This information also may be made available under a specific treaty or agreement with the tax authorities in the country in which the non-U.S. holder resides or is established. Backup withholding, currently at a 24% rate, generally will not apply to payments to a non-U.S. holder of distributions on or the gross proceeds of

a disposition of our common stock provided the non-U.S. holder furnishes the required certification for its non-U.S. status, such as by providing a valid IRS Form W-8BEN, IRS Form W-8BEN-E or IRS Form W-8ECI, or otherwise establishes an exemption, and if the payor does not have actual knowledge, or reason to know, that the holder is a U.S. person who is not an exempt recipient.

Backup withholding is not an additional tax. If any amount is withheld under the backup withholding rules, the non-U.S. holder should consult with a U.S. tax advisor regarding the possibility of and procedure for obtaining a refund or a credit against the non-U.S. holder's U.S. federal income tax liability, if any.

Withholding on Foreign Entities

Sections 1471 through 1474 of the Code, which are commonly referred to as FATCA, impose a U.S. federal withholding tax of 30% on certain payments made to a "foreign financial institution" (as specially defined under these rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding certain U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or an exemption applies. FATCA also generally imposes a U.S. federal withholding tax of 30% on certain payments made to a "non-financial foreign entity" (as specially defined under these rules) unless such entity provides the withholding agent a certification that it does not have any "substantial United States owners" or provides information identifying certain direct and indirect U.S. owners of the entity or an exemption applies. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. FATCA currently applies to dividends paid on our common stock and would have applied also to payments of gross proceeds from the sale or other disposition of our common stock. However, proposed regulations under FATCA provide for the elimination of the federal withholding tax of 30% applicable to gross proceeds of a sale or other disposition of from property of a type that can produce U.S.-source dividends or interest. Under these proposed Treasury Regulations (which may be relied upon by taxpayers prior to finalization), FATCA withholding does not apply to gross proceeds from sales or other dispositions of our common stock.

Prospective investors are encouraged to consult with their tax advisors regarding the possible implications of FATCA on their investment in our common stock.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF ACQUIRING, OWNING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY RECENT AND PROPOSED CHANGE IN APPLICABLE LAW, AS WELL AS TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, NON-U.S. OR U.S. FEDERAL NON-INCOME TAX LAWS.

UNDERWRITING

We and the underwriters named below have entered into an underwriting agreement with respect to the shares being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares indicated in the following table. Goldman Sachs & Co. LLC and Morgan Stanley & Co. LLC are the representatives of the underwriters.

Underwriters	Number of Shares
Goldman Sachs & Co. LLC	
Morgan Stanley & Co. LLC	
Total	

The underwriters are committed to take and pay for all of the shares being offered, if any are taken, other than the shares covered by the option described below unless and until this option is exercised.

The underwriters have an option to buy up to an additional shares from us to cover sales by the underwriters of a greater number of shares than the total number set forth in the table above. They may exercise that option for 30 days from the date of this prospectus. If any shares are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters by us. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

Paid by Us	No Exercise	Full Exercise
Per Share	$	$
Total	$	$

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the initial public offering price. After the initial offering of the shares, the representatives may change the offering price and the other selling terms. The offering of the shares by the underwriters is subject to their receipt and acceptance of the shares being offered and subject to the underwriters' right to reject any order in whole or in part.

We and our officers, directors and holders of substantially all of our shares of common stock have agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any of their common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of Goldman Sachs & Co. LLC and Morgan Stanley & Co. LLC. See section titled "*Shares Eligible for Future Sale*" for a discussion of certain transfer restrictions.

The restrictions described in the immediately preceding paragraph do not apply to, subject to certain limitations, the following transfers: (i) as one or more *bona fide* gifts or charitable contributions, or for bona fide estate planning purposes, (ii) upon death by will, testamentary document or intestate succession, (iii) to any immediate family member of the transferor or any trust for the direct or indirect benefit of the transferor or any immediate family member of the transferor, (iv) to any corporation, partnership, limited liability company or other entity, in each case, all of the beneficial ownership interests of which are held by the transferor or any immediate family member(s) of the transferor, (v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i)-(iv), (vi) if the transferor is a corporation, partnership, limited liability company, trust or other business entity, to an affiliate of such entity or as part of a distribution, transfer or disposition solely to its stockholders, partners, members or other equityholders or to the estate of any such stockholders, partners, members or other equityholders, (vii) by operation of law, such as pursuant to a qualified domestic order, divorce settlement, divorce decree or separation agreement, (viii) to us from an employee of ours upon death, disability or termination of employment, in each case, of such employee, (ix) acquired in the public offering of the securities offered by this prospectus (other than any issuer-directed shares of common stock purchased in the public offering of the securities offered by this prospectus by an officer or director of the company) or in open market transactions after the pricing of the public offering of the securities offered by this prospectus, (x) to us in connection with the vesting, settlement or exercise of restricted stock units, options, warrants or other rights to purchase shares of common stock that are scheduled to expire or

automatically vest during the restricted period, (xi) the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock, (xii) transfers or dispositions of shares of common stock or such other securities pursuant to a bona fide tender offer for shares of our capital stock, merger, consolidation or other similar transaction made to all holders of our securities involving a change of control (as defined in the agreement) of us that has been approved by the Company's board of directors (the "Board"), or (xiii) the conversion of any convertible preferred stock into, or the exercise of any option or warrant for, shares of common stock.

Prior to the offering, there has been no public market for the shares. The initial public offering price has been negotiated among us and the representatives. Among the factors to be considered in determining the initial public offering price of the shares, in addition to prevailing market conditions, will be our historical performance, estimates of the business potential and our earnings prospects, an assessment of our management and the consideration of the above factors in relation to market valuation of companies in related businesses.

We intend to apply to list our common stock on Nasdaq under the symbol "GENB."

In connection with the offering, the underwriters may purchase and sell shares of our common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering, and a short position represents the amount of such sales that have not been covered by subsequent purchases. A "covered short position" is a short position that is not greater than the amount of additional shares for which the underwriters' option described above may be exercised. The underwriters may cover any "covered short position" by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to cover the "covered short position," the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option described above. "Naked" short sales are any short sales that create a short position greater than the amount of additional shares for which the option described above may be exercised. The underwriters must cover any such "naked" short position by purchasing shares in the open market. A "naked" short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of our stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of the common stock. As a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. The underwriters are not required to engage in these activities and may end any of these activities at any time. These transactions may be effected on Nasdaq, in the over-the-counter market or otherwise.

We estimate that our share of the total expenses of the offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding underwriting discounts and commissions, will be approximately $. We have also agreed to reimburse the underwriters for certain of their expenses in an amount up to $.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to the issuer and to persons and entities with relationships with the issuer, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the issuer (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the issuer. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

European Economic Area

In relation to each Member State of the European Economic Area (each, a "Relevant Member State"), an offer to the public of any shares may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any shares may be made at any time under the following exemptions under the EU Prospectus Regulation:

a) to any legal entity which is a "qualified investor" as defined under the EU Prospectus Regulation;

b) to fewer than 150 natural or legal persons (other than "qualified investors" as defined under the EU Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or

c) in any other circumstances falling within Article 1(4) of the EU Prospectus Regulation,

provided that no such offer of shares shall result in a requirement for us or any of the representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or a supplemental prospectus pursuant to Article 23 of the Prospectus Regulation and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, warranted and agreed to and with each of the representatives and us that it is a qualified investor within the meaning of Article 2 of the EU Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in Article 1(4) of the EU Prospectus Regulation, each financial intermediary will also be deemed to have represented, warranted and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public, other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

We and our affiliates, and the representatives and their affiliates, will rely upon the truth and accuracy of the foregoing representations, warranties and agreements. Notwithstanding the above, a person who is not a "qualified investor" and who has notified the representatives of such fact in writing may, with the prior consent of the representatives. Notwithstanding the above, a person who is not a "qualified investor" and who has notified the representatives of such fact in writing may, with the prior consent of the representatives, be permitted to acquire shares in the offer.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression "EU Prospectus Regulation" means Regulation (EU) 2017/1129.

United Kingdom

An offer to the public of any shares may not be made in the United Kingdom, except that an offer to the public in the United Kingdom of any shares may be made at any time under the following exemptions under the UK Prospectus Regulation:

a) to any legal entity which is a "qualified investor" as defined under the UK Prospectus Regulation;

b) to fewer than 150 natural or legal persons (other than "qualified investors" as defined under the UK Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or

c) in any other circumstances falling within section 86 of the Financial Services and Markets Act 2000 (as amended, "FSMA"),

provided that no such offer of shares shall result in a requirement for us or any representative to publish a prospectus pursuant to section 85 of the FSMA or a supplemental prospectus pursuant to Article 23 of the UK Prospectus Regulation and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, warranted and agreed to and with each of the representatives and us that it is a qualified investor within the meaning of Article 2 of the UK Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in Article 1(4) of the UK Prospectus Regulation, each financial intermediary will also be deemed to have represented, warranted and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public, other than their offer or resale in the United Kingdom to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

We and our affiliates, and the representatives and their affiliates, will rely upon the truth and accuracy of the foregoing representations, warranties and agreements. Notwithstanding the above, a person who is not a "qualified investor" and who has notified the representatives of such fact in writing may, with the prior consent of the representatives, be permitted to acquire shares in the offer.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares.

This prospectus is only being distributed to and is only directed at: (A) persons who are outside the United Kingdom; or (B) qualified investors who are also (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order"), or (ii) high net worth companies, and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons falling within (1)-(3) together being referred to as "relevant persons"). The shares are only available to, and any invitation, offer or agreement to subscribe, purchase or otherwise acquire the shares will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this prospectus or any of its contents.

Canada

The shares may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions, and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption form, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Hong Kong

The shares may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) ("Companies (Winding Up and Miscellaneous Provisions) Ordinance") or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) ("Securities and Futures Ordinance"), or (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA")) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for six months after that corporation has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore ("Regulation 32").

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for six months after that trust has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than $200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Japan

The shares have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended) (the "FIEA"). The shares may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person

resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

Brazil

THE OFFER AND SALE OF THE SHARES HAVE NOT BEEN AND WILL NOT BE REGISTERED WITH THE BRAZILIAN SECURITIES COMMISSION (COMISSÃO DE VALORES MOBILIÁRIOS, OR "CVM") AND, THEREFORE, WILL NOT BE CARRIED OUT BY ANY MEANS THAT WOULD CONSTITUTE A PUBLIC OFFERING IN BRAZIL UNDER CVM RESOLUTION NO 160, DATED 13 JULY 2022, AS AMENDED OR UNAUTHORIZED DISTRIBUTION UNDER BRAZILIAN LAWS AND REGULATIONS. THE SHARES MAY ONLY BE OFFERED TO BRAZILIAN PROFESSIONAL INVESTORS (AS DEFINED BY APPLICABLE CVM REGULATION), WHO MAY ONLY ACQUIRE THE SHARES THROUGH A NON-BRAZILIAN ACCOUNT, WITH SETTLEMENT OUTSIDE BRAZIL IN NON-BRAZILIAN CURRENCY. THE TRADING OF THESE SHARES ON REGULATED SECURITIES MARKETS IN BRAZIL IS PROHIBITED.

LEGAL MATTERS

The validity of the shares of our common stock being offered in this prospectus will be passed upon for us by Goodwin Procter LLP. Certain partners of Goodwin Procter LLP have a beneficial interest in an aggregate of less than 1% of our securities. Latham & Watkins LLP is representing the underwriters in this offering.

EXPERTS

The consolidated financial statements of Generate Biomedicines Inc. at December 31, 2024, and for the year then ended, appearing in this prospectus and Registration Statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the Securities and Exchange Commission (the "SEC") a registration statement on Form S-1 (File Number 333-) under the Securities Act with respect to the shares of common stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all the information set forth in the registration statement, some of which is contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and our common stock, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. The SEC also maintains an internet website that contains reports and other information about issuers, like us, that file electronically with the SEC. The address of that website is *www.sec.gov*.

We currently do not file periodic reports with the SEC. On the completion of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for review at the website of the SEC referred to above.

We also maintain a website at *www.generatebiomedicines.com.* Information contained in, or accessible through, our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is only as an inactive textual reference. Upon completion of this offering, you may access, free of charge, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendment to those reported filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC.

GENERATE BIOMEDICINES, INC. AND SUBSIDIARIES

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Generate Biomedicines, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheet of Generate Biomedicines, Inc. and subsidiaries (the Company) as of December 31, 2024, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and non-controlling interest and stockholders' deficit and cash flows for the year then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2024, and the results of its operations and its cash flows for the year then ended in conformity with U.S. generally accepted accounting principles.

The Company's Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations, has a working capital deficiency, and has stated that substantial doubt exists about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2022.

Boston, Massachusetts

December 23, 2025

GENERATE BIOMEDICINES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEET
(in thousands, except share and per share data)

	Year Ended December 31, 2024
Assets	
Current assets:	
Cash and cash equivalents	$ 176,269
Marketable securities	217,358
Restricted cash and cash equivalents (VIE)	1,427
Accounts receivable	308
Prepaid expenses and other current assets	12,129
Total current assets	407,491
Property and equipment, net	37,692
Operating lease right-of-use assets	63,376
Other assets	9,700
Total assets	$ 518,259
Liabilities, convertible preferred stock, non-controlling interest and stockholders' deficit	
Current liabilities:	
Accounts payable	$ 5,667
Accrued expenses and other current liabilities	21,771
Deferred revenue – current	42,425
Current portion of finance lease liabilities	8,932
Operating lease liability, current	7,785
Current portion of restricted stock repurchase liability	46
Total current liabilities	86,626
Non-current liabilities:	
Warrant to purchase convertible preferred stock	1,092
Finance lease liabilities, net of current portion	6,447
Deferred revenue – non-current	15,174
Operating lease liability – non-current	53,808
Other long term liabilities	349
Total liabilities	163,496
Commitments and contingencies (Note 15)	
Convertible preferred stock	789,853
Non-controlling interest	(571)
Stockholders' deficit:	
Common stock, $0.001 par value; 195,956,735 shares authorized as of December 31, 2024; 49,868,555 shares issued as of December 31, 2024; 49,658,664 shares outstanding as of December 31, 2024	50
Additional paid-in capital	38,452
Accumulated other comprehensive income	118
Accumulated deficit	(473,139)
Total stockholders' deficit	(434,519)
Total liabilities, convertible preferred stock, non-controlling interests and stockholders' deficit	$ 518,259

The accompanying notes are an integral part of these consolidated financial statements.

GENERATE BIOMEDICINES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF OPERATIONS

AND COMPREHENSIVE LOSS
(in thousands, except share and per share data)

	Year ended December 31, 2024
Collaboration revenue	$ 20,459
Operating expenses:	
Research and development	175,311
General and administrative	42,087
Total operating expenses	217,398
Loss from operations	(196,939)
Other income (expense), net	
Change in fair value of preferred stock warrant liability	(154)
Interest expense	(2,118)
Interest income	18,118
Foreign currency exchange loss	(79)
Total other income (expense), net	15,767
Loss before provision for income tax	(181,172)
Provision for Income taxes	(212)
Net loss	(181,384)
Net loss attributable to non-controlling interests	(7,613)
Net loss attributable to Generate Biomedicines, Inc. stockholders	(173,771)
Convertible preferred stock accrued dividends	(40,006)
Net loss attributable to Generate Biomedicines, Inc. common stockholders	$ (213,777)
Net loss per share, basic and diluted	$ (4.39)
Weighted average common shares outstanding, basic and diluted	48,736,466
Comprehensive loss:	
Net loss	(181,384)
Unrealized gain on marketable securities	69
Comprehensive loss	$ (181,315)
Comprehensive loss attributable to non-controlling interest	(7,613)
Comprehensive loss attributable to Generate Biomedicines, Inc. stockholders	$ (173,702)

The accompanying notes are an integral part of these consolidated financial statements.

GENERATE BIOMEDICINES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK, NON-CONTROLLING INTEREST AND STOCKHOLDERS' DEFICIT
(in thousands, except share data)

	Convertible Preferred Stock		Non-Controlling Interest	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount		Shares	Amount				
Balance at December 31, 2023	95,321,482	$ 693,548	$ 2,042	47,991,151	$ 48	$ 17,677	$ 49	$ (299,368)	$ (281,594)
Issuance of series C convertible preferred stock (net of issuance costs of $145)	8,139,234	96,305	—	—	—	—	—	—	—
Contributions from non-controlling interests	—	—	5,000	—	—	—	—	—	—
Exercise of stock options	—	—	—	827,950	1	1,126	—	—	1,127
Stock-based compensation	—	—	—	—	—	19,465	—	—	19,465
Vesting of restricted stock	—	—	—	839,563	1	184	—	—	185
Unrealized gain on marketable securities	—	—	—	—	—	—	69	—	69
Net loss	—	—	(7,613)	—	—	—	—	(173,771)	(173,771)
Balance at December 31, 2024	103,460,716	$ 789,853	$ (571)	49,658,664	$ 50	$ 38,452	$ 118	$ (473,139)	$ (434,519)

The accompanying notes are an integral part of these consolidated financial statements.

GENERATE BIOMEDICINES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CASH FLOWS
(in thousands)

	Year Ended December 31, 2024
Operating activities	
Net loss	$ (181,384)
Adjustments to reconcile net loss to net cash used in operating activities:	
Loss (gain) on disposal of property and equipment	(10)
Amortization and accretion on marketable securities	(5,448)
Non-cash stock-based compensation	19,465
Non-cash lease expense	6,006
Depreciation and amortization	15,349
Changes in fair value of preferred stock warrant liability	154
Changes in operating assets and liabilities:	
Accounts receivable	(213)
Prepaid expenses and other current assets	(5,378)
Other assets	(3,499)
Accounts payable	3,499
Operating lease liabilities	(5,550)
Other long term liabilities	349
Accrued expenses and other labilities	4,369
Deferred revenue	34,541
Net cash used in operating activities	(117,750)
Investing activities	
Proceeds from disposal of property and equipment	10
Purchase of marketable securities	(282,979)
Purchases of property and equipment	(3,447)
Proceeds from sales and maturities of marketable securities	228,691
Net cash used in investing activities	(57,725)
Financing activities	
Proceeds from issuance of convertible preferred stock, net of issuance costs	96,324
Contributions from non-controlling interests	5,000
Proceeds from exercise of stock options	1,127
Payments on finance lease obligations	(11,124)
Net cash provided by financing activities	91,327
Net increase (decrease) in cash, cash equivalents and restricted cash	(84,148)
Cash, cash equivalents and restricted cash at the beginning of period	265,979
Cash, cash equivalents and restricted cash at end of period	$ 181,831
Cash and cash equivalents, end of period	176,269
Restricted cash and cash equivalents (VIE)	1,427
Long-term restricted cash	4,135
Cash, cash equivalents and restricted cash at end of period	$ 181,831
Supplemental disclosure of noncash investing and financing information:	
Purchase of property and equipment included in the accounts payable and accrued liabilities	$ 555
Offering costs included in accrued expense	$ 19
Vesting of restricted stock	$ 185

The accompanying notes are an integral part of these consolidated financial statements.

GENERATE BIOMEDICINES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. NATURE OF BUSINESS AND BASIS OF PRESENTATION

Nature of Business – Generate Biomedicines, Inc. (the "Company") is a clinical-stage generative biology company pioneering the AI revolution in biotechnology and drug design and development. The Company's vision is to program biology to generate optimal therapeutics for the greatest impact on human health. Central to its vision is the Generate Platform, designed to be a therapeutic area and protein modality agnostic system integrating computational innovation with scalable biohardware to address therapeutic challenges beyond the reach of traditional technologies. The Company has built its Generate Platform to be a tight and fully-integrated loop (design–build–test–learn) to create proprietary, therapeutically relevant data and differentiated molecular solutions for the biological challenges we aim to address.

Since inception, the Company has devoted substantially all of its resources to drug discovery, the development of the Generate Platform and the advancement of GB-0895 and its other programs and product candidates, along with multiple preclinical programs in immunology and oncology. In addition to its research and development efforts, the Company has invested in establishing and protecting its intellectual property portfolio, raising capital and obtaining financing, organizing and staffing the company, and providing general and administrative support for these operations. It does not have any products approved for sale.

Risks and Uncertainties – The Company is subject to risks common to companies in the biotechnology industry, including, but not limited to, successful development of technology, obtaining additional funding, protection of proprietary technology, compliance with government regulations, risks of failure of preclinical studies and clinical trials, the need to obtain marketing approval for its drug candidates, fluctuations in operating results, economic pressure impacting therapeutic pricing, dependence on key personnel, risks associated with changes in technologies, development by competitors of technological innovations and the ability to manufacture its development candidates and products.

The Company is also subject to additional risks, including the need to obtain additional financing to support its ongoing research and development of its product candidates. Product candidates currently under development will require significant additional research and development efforts, including extensive clinical development and regulatory approval, prior to commercialization. These efforts will require significant amounts of additional capital, adequate personnel infrastructure and extensive compliance reporting capabilities. Even if the Company's development efforts are successful, it is uncertain when, if ever, the Company will realize significant revenue from product sales.

Liquidity and Managements Plan – As of December 31, 2024, the Company had cash, cash equivalents and marketable securities of $393.6 million. The Company has incurred recurring losses since its inception, including a net loss of $181.4 million, of which $7.6 million was attributable to a non-controlling interest for the year ended December 31, 2024. As of December 31, 2024, the Company had an accumulated deficit of $473.1 million. Based on the Company's current capital resources, which consists of its cash, cash equivalents and marketable securities on hand at December 31, 2024, and the additional proceeds from the issuance of Series C convertible preferred stock, par value $0.001 per share (the "Series C convertible preferred stock"), in January 2025 of $22.0 million, it will not have sufficient cash on hand to support current operations for at least twelve months from the date of issuance of these consolidated financial statements. This condition raises substantial doubt about the Company's ability to continue as a going concern.

The Company plans to address this condition by pursuing additional funding through one or more of the following: public or private equity or debt financings, government or other third-party grants, asset sales, royalty financings, partnership, collaboration and licensing arrangements, or a combination of these approaches. The Company may not be able to obtain funding on acceptable terms, or at all. The terms of any future financing may adversely affect the holdings or the rights of the Company's current stockholders.

If the Company is unable to obtain funding, it could be forced to delay, reduce or eliminate some or all of its research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect its business prospects, or it may be unable to continue operations. Although management continues to pursue these plans, there is no assurance that the Company will be successful

in obtaining sufficient funding on terms acceptable to the Company to fund continuing operations, if at all or that any proceeds would be sufficient to support the Company's operating plans for at least the next twelve months from the date of issuance of these financial statements.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation – The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"). Any reference in these notes to applicable guidance is meant to refer to the authoritative United States generally accepted accounting principles as found in the Accounting Standards Codification ("ASC") and Accounting Standards Update ("ASU") of the Financial Accounting Standards Board ("FASB").

Principles of Consolidation – The accompanying consolidated financial statements reflect the consolidated operations of the Company, including its wholly owned subsidiary, Generate Biomedicines Securities Corporation, and variable interest entities where the Company is the primary beneficiary, specifically Pioneering Medicines 02, Inc. ("PMCo"). All intercompany accounts and transactions have been eliminated.

At the inception of a transaction, the Company identifies each entity involved in such transaction for which control is achieved by the Company through means other than voting rights (each a "variable interest entity" or "VIE") and determines if the Company is the primary beneficiary of such entity's operations. A VIE is broadly defined as an entity where either (i) the equity investors as a group, if any, do not have a controlling financial interest, or (ii) the equity investment at risk is insufficient to finance that entity's activities without additional subordinated financial support. The Company consolidates investments in a VIE when the Company is determined to be the primary beneficiary. ASC Topic 810, *Consolidations* ("ASC 810"), requires the Company to perform a qualitative approach to determining whether or not a VIE will need to be consolidated. This evaluation is based on the Company's ability to direct and influence the activities of a VIE that most significantly impact that entity's economic performance, whether the Company has the power to direct those activities, and if the Company's obligation to absorb losses or receive benefits from the VIE could potentially be significant to the VIE.

For consolidated entities with ownership interest or economic rights held by third-parties, the Company records net loss attributable to non-controlling interests in its consolidated statements of operations equal to the percentage of common stock ownership interest retained in the respective operations by the non-controlling parties. The Company presents non-controlling interests as a component of shareholders' equity or mezzanine equity on its consolidated balance sheets based on the redemption rights of the equity interest. The Company records the non-controlling interests' share of loss based on the percentage of ownership interest retained by the respective non-controlling interest holders.

Use of Estimates – The preparation of the consolidated financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reporting period. The Company bases its estimates and assumptions on historical experience, known trends and other market-specific or other relevant factors that it believes to be reasonable under the circumstances. On an ongoing basis, management evaluates its estimates, which include but are not limited to accrued research and development expenses, the valuation of common stock and warrants to purchase convertible preferred stock, stock based compensation expense and the incremental borrowing rate for operating and finance lease right-of-use assets, and income taxes. Actual results could differ from those estimates. Changes in estimates are recorded in the period in which they become known.

Cash and Cash Equivalents – Cash and cash equivalents are short-term, highly liquid investments with original maturities of three months or less at the date of purchase. Investments qualifying as cash equivalents primarily consist of money market funds.

Restricted Cash – As of December 31, 2024, restricted cash consisted of $4.1 million, used to secure the letters of credit for the benefit of the landlords in connection with the Company's lease agreements (Note 14). These amounts are classified as other assets in the Company's consolidated balance sheet.

Restricted Cash and Cash Equivalents (VIE) – As of December 31, 2024, restricted cash and cash equivalents consisted of $1.4 million. The Company records the cash and cash equivalents of PMCo as restricted cash because the Company does not have control over the cash and cash equivalents and

the cash and cash equivalents of PMCo can only be used to settle PMCo obligations. For restricted cash and cash equivalents, see Note 18.

Marketable Securities – Marketable securities consist of term deposits and government securities with original maturities greater than 90 days. Investments are classified at the time of purchase, based on management's intent and ability to sell the marketable securities before maturity. All of the Company's marketable security investments are classified as available-for-sale securities and are recorded as current assets on the Company's consolidated balance sheets because they are considered available to support current operations of the Company and are reported at fair market value using quoted prices in active markets for similar securities. At each balance sheet date, the Company reassess its marketable securities classification through examining its intent and ability to sell its marketable securities. The Company presents credit losses, if applicable, as an allowance rather than as a reduction in the amortized cost of the available-for-sale securities.

Marketable securities are considered impaired when a decline in fair value is judged to be other-than-temporary. The Company consults with its investment managers and considers available quantitative and qualitative evidence in evaluating potential impairment of its marketable securities on a quarterly basis. If the cost of an individual investment exceeds its fair value, the Company evaluates, among other factors, general market conditions, the duration and extent to which the fair value is less than cost and its intent and ability to hold the investment. Once a decline in fair value is determined to be other-than-temporary, an impairment charge will be recorded to other income (expense), net in the consolidated statements of operations and comprehensive loss. No allowance for credit losses was established as of December 31, 2024.

Unrealized gains and losses on the Company's available-for-sale securities are recorded in other comprehensive income or loss in the consolidated statements of operations and comprehensive loss. Purchase premiums and discounts are amortized to interest income over the terms of the related securities. The cost of securities sold is determined on a specific identification basis, and realized gains and losses are included as other income (expense), net within the consolidated statements of operations and comprehensive loss.

Concentrations of Credit Risk – Financial instruments that subject the Company to significant concentrations of credit risk consist primarily of cash. The Company places its cash in a financial institution that management believes to be of high credit quality and, consequently, the Company does not believe it is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships. Bank accounts in the United States are insured by the Federal Deposit Insurance Corporation ("FDIC") up to $250,000. As of December 31, 2024, predominantly all of the Company's primary operating cash accounts significantly exceeded the FDIC limits.

Accounts Receivable – The Company's receivables primarily relate to amounts reimbursable under its collaboration agreements. Accounts receivable have standard payment terms that generally require payment within thirty (30) days. The Company maintains an allowance for credit losses to provide for the estimated amounts of receivables that will not be collected over the estimated life of the assets. To date, the Company has not incurred any credit losses, and the Company did not have an allowance for credit losses as of December 31, 2024.

Property and Equipment – Property and equipment are recorded at cost and depreciated using the straight-line method over the estimated useful lives of the respective assets. Construction-in-process reflects amounts incurred for property, equipment or improvements that have not been placed in service. Estimated useful lives by major asset category are as follows:

	Estimated Useful Life
Lab equipment	3-5 years
Finance lease right-of-use assets	5 years
Computers and software	3 years
Furniture and fixtures	5-7 years
Leasehold improvements	Shorter of useful life or remaining lease term

Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is included in the consolidated statement of operations and comprehensive loss. Expenditures for repairs and maintenance are charged to expenses as incurred.

Impairment of Long-Lived Assets – Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. When such events occur, the Company compares the carrying amounts of the assets to their undiscounted expected future cash flows. If this comparison indicates that there is an impairment, the amount of the impairment is calculated as the difference between the carrying value and the fair value. The Company has not recorded any impairment charges in the periods presented.

Deferred Offering Costs – The Company capitalizes certain legal, professional, accounting, and other third-party fees that are incurred prior to consummation of and directly associated with a financings as deferred offering costs until such financings are consummated. After the consummation of an equity financing, these costs are recorded as a reduction of the proceeds from the offering, either as a reduction of the carrying value of the preferred stock or in stockholders' deficit as a reduction of additional paid-in capital. Should the in-process equity financing be abandoned, the deferred offering costs would be expensed immediately as a charge to operating expenses in the consolidated statement of operations and comprehensive loss. There were no deferred offering costs as of December 31, 2024.

Revenue Recognition – The Company recognizes revenue from contracts with customers in accordance with ASC Topic 606 *Revenue from Contracts with Customers* ("ASC 606"). Under ASC 606, revenue is recognized when a customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. In order to achieve this core principle, the Company applies the following five steps when recording revenue: (1) identify the contract, or contracts, with the customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract and (5) recognize revenue when, or as, performance obligations are satisfied.

At contract inception, the Company assesses the goods or services promised within each contract, whether each promised good or service is distinct, and determines those that are performance obligations. In assessing whether promised goods or services are distinct, the Company considers factors such as the stage of development of the underlying intellectual property, the capabilities of the customer to develop the intellectual property on their own and whether the required expertise is readily available. In addition, the Company considers whether the customer can benefit from a promise for its intended purpose without the receipt of the remaining promises, whether the value of the promise is dependent on the unsatisfied promises, whether there are other vendors that could provide the remaining promises, and whether it is separately identifiable from the remaining promises. The Company allocates the transaction price to the identified performance obligations based on the estimated standalone selling price. The Company must develop assumptions that require judgment to determine the standalone selling price for each performance obligation identified in the contract. The Company utilizes key assumptions to determine the standalone selling price, which may include other comparable transactions, pricing considered in negotiating the transaction and the estimated cost. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when or as the performance obligation is satisfied.

As part of the accounting for arrangements under ASC 606, the Company must use significant judgment to determine: (a) the performance obligations based on the determination under step (2) above; and (b) the transaction price under step (3) above. The Company also uses judgment to determine whether milestones or other variable consideration, except for royalties and sales-based milestones where such payments principally relate to a license of intellectual property, should be included in the transaction price. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the control of the Company or the licensee, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. The Company evaluates factors such as the scientific, clinical, regulatory, commercial, and other risks that must be overcome to achieve the particular milestone in making this assessment. There is considerable judgment involved in determining whether it is probable that a significant revenue reversal would not occur. At the end of each subsequent reporting period, the Company reevaluates the probability of achievement of all milestones subject to constraint and, if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis in the period of adjustment. The transaction price is allocated to each performance obligation based on the relative standalone selling price of each performance obligation in the contract. Certain variable consideration is allocated specifically to one or more performance obligations in a contract when the terms of the variable consideration relate to the satisfaction of the performance obligation and the resulting amounts allocated to each performance obligation are consistent with the amounts the Company would expect to receive for each performance obligation.

The consideration allocated to each performance obligation is recognized as revenue when control is transferred for the related goods or services. The Company recognizes revenue related to each service

based performance obligation over time using the costs incurred input method, such that revenue is recognized based on the Company's efforts or inputs to the satisfaction of a performance obligation. Through this method, the Company applies a cost-to-cost method and compares the actual costs incurred to date with the current estimate of total costs to complete ("ETCs") to measure the satisfaction of each performance obligation and recognize revenue as research activities progress and costs are incurred. Throughout each service period, the Company monitors its ETCs to determine if an adjustment is needed to ensure that revenue is recognized proportionally for costs incurred to date relative to the total costs expected to be incurred for the total performance obligation. As there are changes in facts and circumstances that impact management's ETCs with respect to ongoing and prospective research activities, the ETCs are updated accordingly, and a cumulative catch-up is recorded.

Customer Options – The Company's arrangements may provide a customer with the right to certain optional purchases, such as the right to license a target either at the inception of the arrangement or within a pre-defined option period. Under these agreements, fees may be due to the Company at the inception of the arrangement as an upfront fee or payment or upon the exercise of an option to acquire a license. If an arrangement is determined to contain customer options that allow the customer to acquire additional goods or services, the goods and services underlying the customer options are not considered to be performance obligations at the outset of the arrangement, as they are contingent upon option exercise. The Company evaluates the customer options for material rights, or options to acquire additional goods or services for free or at a discount.

Royalties – For arrangements that include sales-based royalties, including milestone payments based on a level of sales, and the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue at the later of (i) when the related sales occur or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). To date, the Company has not recognized any royalty revenue resulting from any of its licensing arrangements.

Collaborative arrangements – The Company analyzes its collaboration arrangements to assess whether they are within the scope of ASC Topic 808, *Collaborative Arrangements* ("ASC 808"), to determine whether such arrangements involve joint operating activities performed by parties that are both active participants in the activities and exposed to significant risks and rewards dependent on the commercial success of such activities. This assessment is performed throughout the life of the arrangement based on changes in the responsibilities of all parties in the arrangement. For collaboration arrangements within the scope of ASC 808 that contain multiple elements, the Company first evaluates whether any of the elements of the collaboration are within the scope of other ASC guidance, including ASC 606, and follows the relevant provisions of that guidance for that element. The Company accounts for components of collaborative arrangements that are outside the scope of other guidance by analogy to the authoritative accounting literature or, if there is no appropriate analogy, by using a reasonable, rational and consistently applied accounting policy election. Payments or reimbursements that are the result of a collaborative relationship instead of a vendor-customer relationship are recorded as an increase to collaboration revenue or reduction in research and development expense, depending on the nature of the activity.

Research and Development Costs – Research and development costs are comprised of costs incurred in performing research and development activities, including salaries, stock-based compensation and benefits, facilities costs and laboratory supplies, depreciation, manufacturing expenses and external costs of outside vendors engaged to conduct planned clinical development, preclinical development, manufacturing and manufacturing process development and other research support activities. Research and development costs are expensed as incurred. Research and development costs that are paid in advance of performance (if any) are capitalized as a prepaid expense and amortized over the service period as the services are provided.

Research Contract Costs and Accruals – The Company has entered into various research and development-related contracts with research institutions and other third-party companies. These agreements are generally cancelable, and related payments are recorded as research and development expenses as incurred. The Company records accruals for estimated ongoing research costs and receives updated estimates of costs and amounts owed on a monthly basis from its third-party service providers. When evaluating the adequacy of the accrued liabilities, the Company analyzes progress of the studies, including the phase or completion of events, invoices received and contracted cost estimates from its third-party service providers. Estimates are made in determining the accrued balances at the end of any reporting period. Actual results could differ from the Company's estimates. The Company's historical accrual estimates have not been materially different from the actual costs.

Stock-Based Compensation – The Company accounts for all stock-based payment awards granted to employees and non-employees as stock-based compensation expense at fair value. The Company grants equity awards under its stock-based compensation plan, which may include stock options and restricted common stock. The measurement date for employee and non-employee awards is the date of grant. For the equity awards that vest based on a service condition, stock-based compensation costs are recognized as expense over the requisite service period, which is the vesting period, on a straight-line basis. For equity awards with performance conditions, the Company recognizes stock-based compensation expense when the achievement of a performance-based milestone is probable, and is recognized based on the accelerated attribution model. Stock-based compensation expense is classified in the accompanying consolidated statement of operations and comprehensive loss based on the function to which the related services are provided. The Company recognizes stock-based compensation expense for the portion of awards that have vested. Forfeitures are recorded as they occur.

The fair value of each share option is estimated on the date of grant using the Black-Scholes option-pricing model (the "Black-Scholes OPM"). See Note 12 for the Company's assumptions used in connection with share options granted during the periods covered by these consolidated financial statements. Assumptions used in the Black-Scholes OPM include the following:

Expected volatility – As a private company, the Company lacks company-specific historical and implied volatility information for its common stock. Therefore, it estimates its expected share volatility based on the historical volatility of publicly traded peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price.

Expected term – The Company uses the simplified method, under which the expected term is presumed to be the midpoint between the vesting date and the end of the contractual term. The Company utilizes this method due to the lack of historical exercise data and the plain nature of its stock-based awards. If vesting is subject to a performance condition, the expected term is based on the expected period to vest and the contractual term.

Risk-free interest rate – The risk-free interest rate is determined by reference to the United States ("U.S.") Treasury yield curve in effect at the time of grant of the award for time periods that are approximately equal to the expected term of the award.

Expected dividend – Expected dividend yield of zero is based on the fact that the Company has never paid cash dividends on its common stock and does not expect to pay any cash dividends in the foreseeable future.

Fair value of common stock – The grant date fair value of restricted common stock is calculated based on the grant date fair value of the underlying common stock less any purchase price. The fair value of the common stock is also used as an input to the Black-Scholes OPM to value stock options. The Company's board of directors (the "Board") determines the fair value of the Company's common stock, with input from management, considering the Company's most recently available third-party valuations of common stock, as well as additional factors which may have changed since the date of the most recent valuation through the date of grant. Significant changes to the key assumptions underlying the factors used could result in different fair values of common stock at each valuation date.

Leases – Pursuant to ASC Topic 842, *Leases* ("ASC 842"), at the inception of an arrangement, the Company determines whether the arrangement is or contains a lease. A contract is or contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. At the lease commencement date, when control of the underlying asset is transferred from the lessor to the Company, the Company classifies a lease as either an operating or finance lease and recognizes a right-of-use ("ROU") asset and a current and non-current lease liability as applicable, in the consolidated balance sheet if the lease has a term greater than one year. As permitted under ASC 842, the Company has made an accounting policy election, for all classes of underlying assets, to not recognize ROU assets and lease liabilities for leases having a term of twelve months or less. When it determines the lease term, the Company considers the committed lease term and any options available in the lease agreement. The Company's lease terms may include options to extend the lease, or the option to purchase the asset, only when it is reasonably certain that the Company will exercise that option.

At the lease commencement date, operating and finance lease liabilities, and their corresponding ROU assets are recorded at the present value of future lease payments over the expected remaining lease term using the discount rate implicit in the lease, if it is readily determinable, or the Company's incremental borrowing rate. Certain adjustments to the ROU asset may be required for items such as lease prepayments, incentives received or initial direct costs. The Company's incremental borrowing rate

reflects the fixed rate at which the Company could borrow the amount of the lease payments in the same currency on a collateralized basis, for a similar term in a similar economic environment. Lease cost for operating leases is recognized on a straight-line basis over the lease term as an operating expense. For finance leases, amortization expense and interest expense are recognized separately in the consolidated statements of operations, with amortization expense recognized on a straight-line basis and interest expense recognized using the effective interest method.

The Company enters into contracts that contain both lease and non-lease components. Non-lease components include costs that do not provide a right to use a leased asset but instead provide a service, such as common area maintenance charges. The Company has elected to combine the lease and non-lease components together as a single lease component for all existing classes of underlying assets. Variable costs associated with the lease, such as reimbursement of real estate taxes and utilities, are not included in the measurement of right-to-use assets and lease liabilities but rather are expensed when the events determining the amount of variable consideration to be paid have occurred.

Income Taxes – The Company accounts for income taxes under the asset and liability method pursuant to ASC Topic 740, *Accounting for Income Taxes* ("ASC 740"), which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements. Under this method, the Company determines deferred tax assets and liabilities on the basis of the differences between the financial statement and tax bases of assets and liabilities by using enacted tax rates in effect for the year in which the differences are expected to reverse or settled. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company recognizes deferred tax assets to the extent of management's judgement that these assets are more likely than not to be realized. In making such a determination, management considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. If the Company determines that it would be able to realize its deferred tax assets in the future in excess of their net recorded amount, the Company would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Company also accounts for uncertain tax positions pursuant to ASC 740-10, which prescribes a two-step process in which (1) it is more likely than not that the tax position will be sustained on the basis of the technical merits of the position, and (2) for those tax positions that meet the more-likely-than-not recognition threshold, the benefit recognized is the largest amount that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority. As of December 31, 2024, the Company had not identified any significant uncertain tax positions. In addition, the Company recognizes interest and penalties related to unrecognized tax benefits in the provision for income taxes in the accompanying statement of operations. As of December 31, 2024, the Company had not recorded any accrued interest or penalties related to uncertain tax positions in the consolidated balance sheet.

Fair Value Measurements – Certain assets and liabilities are carried at fair value. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- **Level 1** – Quoted prices in active markets for identical assets or liabilities
- **Level 2** – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly
- **Level 3** – Unobservable inputs that reflect the Company's own assumptions about the assumptions market participants would use in pricing the asset or liability

The Company's cash equivalents, marketable securities and preferred stock warrant liability are carried at fair value, determined according to the fair value hierarchy described above (see Note 4). The carrying values of the Company's other financial instruments, including accounts payable and accrued expenses, certain prepaid expenses and other current assets and other current liabilities approximate their fair values due to the short-term nature of these liabilities.

Convertible Preferred Stock – The Company records convertible preferred stock at fair value upon issuance, net of any issuance costs. The Company's convertible preferred stock are subject to a dividend when and if declared by the Board. The Company's Series B convertible preferred stock, par value $0.001 per share (the "Series B convertible preferred stock"), and Series C convertible preferred stock are entitled to receive cumulative dividends. Since inception, no dividend has been declared by the Board. The Company's convertible preferred stock is classified outside of stockholders' deficit on the consolidated balance sheet because the holders of such shares have redemption rights in the event of a deemed liquidation that, in certain situations, is not solely within the control of the Company. No accretion has been recognized as the contingent events that could give rise to redemption are not deemed probable.

Net Loss per Share – The Company follows the two-class method when computing net loss per share attributable to Generate Biomedicines, Inc. common stockholders as the Company has issued shares that meet the definition of participating securities. The two-class method determines net loss per share for each class of common and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires earnings for the period to be allocated between common and participating securities based upon their respective rights to share in the earnings as if all losses for the period had been distributed. During periods of loss, there is no allocation required under the two-class method since the participating securities do not have a contractual obligation to fund the losses of the Company.

The Company calculates basic net loss per share by dividing the net loss attributable to Generate Biomedicines, Inc. common stockholders by the weighted average number of common shares outstanding for the period. In the period presented, the Company included cumulative dividends on Series B and Series C convertible preferred stock in its calculation of net loss attributable to Generate Biomedicines, Inc. common stockholders. Diluted net loss per share attributable to Generate Biomedicines, Inc. common stockholders is computed by dividing the net loss attributable to Generate Biomedicines, Inc. common stockholders by the weighted average number of common shares outstanding for the period, including the effect of potentially dilutive common shares. For purpose of this calculation, outstanding options to purchase shares of common stock, unvested restricted common stock, shares of convertible preferred stock and warrants to purchase shares of convertible preferred stock are considered potentially dilutive common shares. The Company has generated a net loss in the period presented, therefore, basic and diluted net loss per share attributable to Generate Biomedicines, Inc. common stockholders is the same, as the potentially dilutive securities would be anti-dilutive.

Warrant Liability – Freestanding warrants related to shares that are contingently redeemable are classified as a liability on the Company's consolidated balance sheet. The warrants are initially recorded at fair value on the date of grant and are subsequently remeasured to fair value at each balance sheet date. Changes in fair value of these warrants are recognized as a component of other income (expense), net in the Company's consolidated statement of operations and comprehensive loss. The Company will continue to adjust the liability for changes in fair value until the earlier of the exercise or expiration of the warrants, or when the warrants become indexed to the Company's own stock. The Company classifies the liabilities as noncurrent as the settlement of the warrants is not expected within the next twelve months.

Comprehensive Loss – Comprehensive loss includes net loss as well as other changes in stockholders' deficit that result from transactions and economic events other than those with stockholders and non-controlling interests. The Company's comprehensive net loss equals the reported net loss for all periods presented.

Emerging Growth Company Status – The Company is an emerging growth company ("EGC"), as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and may take advantage of reduced reporting requirements that are otherwise applicable to public companies. Section 107 of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies are required to comply with those standards. The Company has elected to use the extended transition period for complying with new or revised accounting standards.

Recently Issued Accounting Pronouncements Not Yet Adopted – In December 2023, the FASB issued ASU No. 2023-09, *Improvements to Income Tax Disclosures* (Topic 740). This ASU requires disclosure of disaggregated information about a reporting entity's effective tax rate reconciliation as well as additional information on income taxes paid. This ASU is effective on a prospective basis for annual periods beginning after December 15, 2024. Early adoption is also permitted for annual financial statements that have not yet been issued or made available for issuance. This ASU may result in the

required additional disclosures being included in the Company's consolidated financial statements, once adopted. The Company is currently evaluating the impact of this standard on its financial statements and related disclosures.

In November 2024, the FASB issued ASU 2024-03, *Income Statement - Reporting Comprehensive Income - Expense Disaggregation Disclosures* (Subtopic 220-40): *Disaggregation of Income Statement Expenses*. This update requires that at each interim and annual reporting period public entities disclose (1) the amounts of purchases of inventory, employee compensation, depreciation, amortization, and depletion in commonly presented expense captions; (2) certain amounts that are already required to be disclosed under current GAAP in the same disclosure as the other disaggregation requirements; (3) a qualitative description of the amounts remaining in relevant expense captions that are not separately disaggregated quantitatively; (4) the total amount of selling expenses and; (5) in annual reporting periods, the definition of selling expenses. In January 2025, the FASB issued ASU 2025-01, *Income Statement - Reporting Comprehensive Income - Expense Disaggregation Disclosures* (Subtopic 220-40): Clarifying the Effective Date. This update clarifies that ASU 2024-03 is effective for annual reporting periods beginning after December 15, 2026, and interim periods within annual reporting periods beginning after December 15, 2027. Early adoption is permitted. The Company is currently evaluating the impact of adopting this guidance on its financial statements.

In September 2025, the FASB issued ASU 2025-06, *Intangibles - Goodwill and Other - Internal-Use Software* (Subtopic 350-40): Targeted Improvements to the Accounting for Internal-Use Software. This update removes all references to prescriptive and sequential software development stages throughout Subtopic 350-40. The update requires an entity to start capitalizing software costs when management has authorized and committed to funding the software project, and it is probable that the project will be completed and the software will be used to perform the function intended. The update further specifies that the disclosures in Subtopic 360-10 are required for all capitalized internal-use software costs. This update is effective for annual reporting periods beginning after December 15, 2027, and interim reporting periods within those annual reporting periods. Early adoption is permitted. The guidance can be applied using a prospective transition approach, a modified transition approach that is based on the status of the project and whether software costs were capitalized before the date of adoption, or a retrospective transition approach. The Company is currently evaluating the impact of adopting this guidance on its financial statements.

3. CASH EQUIVALENTS AND MARKETABLE SECURITIES

The following tables summarize the amortized cost and fair value of the Company's cash equivalents and marketable securities (in thousands):

	December 31, 2024:			
	Amortized Cost Basis	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Cash equivalents:				
Money market funds	$ 77,070	$ —	$ —	$ 77,070
	$ 77,070	—	—	$ 77,070
Marketable securities:				
Government securities	$ 157,240	$ 119	$ (1)	$ 157,358
Term deposits	60,000	—	—	60,000
	$ 217,240	$ 119	$ (1)	$ 217,358

The Company did not record a provision for credit losses on any marketable securities for the year ended December 31, 2024. No securities held by the Company were delinquent on contractual payments as of December 31, 2024, nor were any securities placed on non-accrual status for the year then ended. Interest on investments is recognized as interest income in the consolidated statements of operations and comprehensive loss. All marketable securities held as of December 31, 2024 had remaining contractual maturities of less than one year.

Information pertaining to marketable securities with gross unrealized losses as of December 31, 2024, for which the Company did not recognize a provision for credit losses under the current expected credit loss methodology, aggregated by investment category and length of time that individual securities had been in a continuous loss position, is as follows (in thousands):

		December 31, 2024 – Less than 12 Months	
	# of Holdings	Gross Unrealized Loss	Fair Value
Government Securities	3	$ (1)	$ 12,213
	3	$ (1)	$ 12,213

4. FAIR VALUE MEASUREMENTS

The following table sets forth by level, within the fair value hierarchy, the assets and liabilities carried at fair value on a recurring basis (in thousands):

	Fair Value Measurements as of December 31, 2024:			
	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	$ 77,070	$ —	$ —	$ 77,070
	$ 77,070	$ —	$ —	$ 77,070
Marketable securities:				
Government securities	$ —	$ 157,358	$ —	$ 157,358
Term deposits	—	60,000	—	60,000
	$ —	$ 217,358	$ —	$ 217,358
Liabilities:				
Warrant to purchase convertible preferred stock	$ —	$ —	$ 1,092	$ 1,092
	$ —	$ —	1,092	$ 1,092

Valuation of the Warrant to Purchase Convertible Preferred Stock

The fair value of the preferred stock warrant liabilities was determined using the Black-Scholes OPM with the assumptions as disclosed in Note 8. These assumptions include significant judgments, including the fair value of the underlying preferred stock. An increase or decrease in the estimated fair value will result in increases or decreases in the fair value of the warrant liability and such changes could be material.

The following table presents a roll-forward of the aggregate fair values of the Company's liabilities for which fair value is determined by Level 3 inputs (in thousands):

	Warrant to Purchase Preferred Stock
Balance as of December 31, 2023	$ 938
Change in fair value	154
Balance as of December 31, 2024	$ 1,092

There were no transfers among Level 1, Level 2, or Level 3 categories in the period presented.

Financial Instruments Not Recorded at Fair Value – The carrying value of accounts receivable, accounts payable and accrued expenses that are reported on the consolidated balance sheet approximate their fair value because of the relatively short period of time between origination and expected realization or settlement.

5. COLLABORATION AGREEMENTS

Agreement with Novartis Pharma AG ("Novartis")

On September 19, 2024, the Company entered into a Collaboration and License Agreement with Novartis (the "Novartis Collaboration Agreement") to discover, develop, manufacture and commercialize protein therapeutics using the Generate Platform. The collaboration covers multiple collaboration targets, conducted under applicable research plans during defined research terms. As consideration for the collaboration, the Company received a $50.0 million upfront payment. Novartis also purchased 1,265,822 shares of our Series C convertible preferred stock for $15.0 million. The Company is eligible to receive up to $1.0 billion across all programs upon the achievement of certain performance-based milestones, inclusive of $130.0 million in development and regulatory milestones and $210.0 million in commercial milestones associated with each research program. Novartis is also obligated to pay, on a licensed product-by-licensed product and on a country-by-country basis, tiered royalties ranging from a mid-single digit to a low double-digit percentage on worldwide net sales of any licensed product, subject to specified reductions and offsets.

The Company concluded that the per share purchase price, paid by Novartis, was equal to the per share fair value of Series C convertible preferred stock. As such, there is no impact to the transaction price related to the investment in Series C convertible preferred stock by Novartis.

The Company concluded that the arrangement contemplated by the Novartis Collaboration Agreement represents a contract with a customer within the scope of ASC 606. The Company determined that for each research program, the research services and related research license granted under the Novartis Collaboration Agreement are not distinct and should be a combined performance obligation. The transaction price at inception was $50.0 million, representing the nonrefundable upfront fee. All contingent payments represent variable consideration that are constrained at inception as the achievement of the milestones underlying such contingent payments is based on either the Company or Novartis's ability to execute under the respective research program plans which is not certain at contact inception. The Company allocated the transaction price to each of the distinct research program performance obligations on a relative stand-alone selling price basis.

The Company recognizes revenue related to each distinct performance obligation over time using the costs incurred input method, such that revenue is recognized based on the Company's efforts or inputs to the satisfaction of a performance obligation.

The Company allocated the transaction price to the performance obligations on a relative selling price basis as follows: (i) $16.7 million to the first research program; (ii) $16.7 million to the second research program; (iii) $16.6 million related to the third research program.

The Company recognized $2.3 million of revenue under the Novartis Collaboration Agreement during the year ended December 31, 2024. The remaining transaction price of $47.7 million is expected to be recognized by the Company as revenue through 2026. As of December 31, 2024, all contingent payments were constrained. The Company will re-evaluate the transaction price in each reporting period, as uncertain events are resolved, or as other changes in circumstances occur.

Agreement with Amgen Inc. ("Amgen")

On December 24, 2021, the Company entered into a Collaboration and License Agreement, as amended by the First Amendment dated October 5, 2022 and the Second Amendment dated December 12, 2023 (as amended from time to time, the "Amgen Collaboration Agreement"), with Amgen to identify biologic proteins and antibodies directed against specified targets. The Amgen Collaboration Agreement initially covered five collaboration targets. In addition, Amgen has the option to nominate up to five additional collaboration targets, at additional cost, the first of which was exercised in December 2023 related to the sixth target. As consideration for the collaboration, the Company received a $50.0 million upfront payment. In connection with the Second Amendment, which added an additional collaboration target, the Company received an additional payment of $5.0 million. The Company is eligible to receive up to $370.0 million for each program upon the achievement of certain milestones, including $160.0 million in development and regulatory milestones and $210.0 million in commercial milestones per program. Amgen is also obligated to pay, on a licensed product-by-licensed product and on a country-by-country basis, tiered royalties ranging from a mid-single digit up to a low double-digit percentage on worldwide net sales of any licensed product, subject to customary reductions and offsets. Additionally, the Amgen Collaboration Agreement included an investment by Amgen of $25.0 million in equity, at the offering price, if the Company consummated certain future equity offerings. Amgen purchased 2,109,704

shares of the Company's Series C convertible preferred stock for approximately $25.0 million on May 9, 2023.

The per share purchase price that would be paid by Amgen, if the Company were to engage in a future equity offering, is equal to the per share fair value of the Company's other investors at the time, therefore would not impact the transaction price under the Amgen Collaboration Agreement.

The Company assessed this arrangement in accordance with ASC 606 and concluded that Amgen is a customer. The Company determined that the research activities and the exclusive license granted under the Amgen Collaboration Agreement are not individually distinct and should be combined for each target program, and each target program was considered as a distinct performance obligation. Therefore, the transaction price was allocated to each target program on a relative stand-alone selling price basis.

In connection with the modification in 2023, the Company allocated the transaction price to the performance obligations on a relative selling price basis as follows: (i) $9.2 million to the first target program; (ii) $10.4 million to the second target program; (iii) $9.2 million to the third target program; (iv) $9.0 million to the fourth target program; (v) $9.5 million to the fifth target program and (vi) $7.7 million to the sixth target program.

The Company recognizes revenue related to each performance obligation over time using the costs incurred input method, such that revenue is recognized based on the Company's efforts or inputs to the satisfaction of a performance obligation.

During the year ended December 31, 2024, a development milestone related to an initial collaboration target was achieved which triggered a $5.0 million milestone payment to the Company. The $5.0 million milestone payment was fully recognized during the year ended December 31, 2024 as this variable consideration was allocated to a distinct performance obligation and the Company had completed its related performance obligation related to the collaboration target. All other milestones and royalties were constrained. The Company will re-evaluate the transaction price in each reporting period, as uncertain events are resolved, or as other changes in circumstances occur.

The Company recognized $18.2 million of revenue during the year ended December 31, 2024. The remaining transaction price of $9.9 million is expected to be recognized as revenue through 2026.

Agreement with The University of Texas M.D. Anderson Cancer Center

In April 2023, the Company entered into a co-development and commercialization collaboration agreement with The University of Texas M.D. Anderson Cancer Center ("MD Anderson") to discover and develop protein therapeutics for up to five oncology targets. Under the agreement, the Company and MD Anderson agreed to share research and development expenses as well as profits generated through commercialization of jointly developed products. The arrangement is considered a collaboration agreement under ASC 808 and the Company recognizes costs as incurred and reimbursements as a reduction of research and development expense. During the year ended December 31, 2024, the MD Anderson reimbursed $0.2 million that was recognized as a reduction to research and development by the Company.

Agreement with Roswell Park Comprehensive Cancer Center ("Roswell Park")

In October 2023, the Company entered into a collaboration agreement with Roswell Park to discover and develop chimeric antigen receptors T-cell therapies and armoring technologies for up to three oncology targets. Under the agreement, the Company and Roswell Park agreed to share research and development expenses as well as profits generated through commercialization of jointly developed products. The arrangement is considered a collaboration agreement under ASC 808 and the Company recognizes costs as incurred and reimbursements as a reduction of research and development expense. During the year ended December 31, 2024, no reimbursement was received from Roswell Park.

6 PROPERTY AND EQUIPMENT

Property and equipment consisted of the following (in thousands):

	Year Ended December 31, 2024
Finance lease right of use assets	$ 42,747
Lab equipment	14,125
Computers and software	3,457
Furniture and fixtures	2,023
Leasehold improvements	9,626
Construction in process	886
Total property and equipment	72,864
Less accumulated depreciation	(35,172)
Property and equipment, net	37,692

The Company leases equipment under agreements which are classified as finance lease liabilities in the accompanying consolidated balance sheet. The equipment and obligations related to the leases are recorded at the present value of the minimum lease payments. Depreciation is computed on a straight-line basis over the shorter of the estimated useful lives of the assets or remaining lease term. Depreciation expense related to leased equipment totaled $8.5 million for the year ended December 31, 2024.

Depreciation and amortization expense for the year ended December 31, 2024 was $15.3 million, including the depreciation expense related to the leased equipment.

7 ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other current liabilities consisted of the following (in thousands):

	Year Ended December 31, 2024
Compensation and benefit	$ 13,305
Research and development	5,621
Legal and professional	413
Other current liabilities	2,432
Total accrued expenses and other current liabilities	$ 21,771

8 NET LOSS PER SHARE

Basic net loss per share is computed by dividing net loss attributable to Generate Biomedicines, Inc. common stockholders by the weighted average number of shares of the Company's common stock outstanding during the period. Diluted net loss per share is computed similarly to basic net loss per share except that it also includes potential common shares only if they are dilutive. When participating securities exist, earnings or losses are allocated between common and participating securities under the two-class method before calculating earnings per share. For the period presented, basic and diluted net loss per share are the same as any potential common shares would be anti-dilutive and the participating securities do not share in losses of the Company.

The following securities are common stock equivalents, but were excluded in the computation of diluted net loss per common stock because to do so would have been anti-dilutive:

	Year Ended December 31, 2024
Series A convertible preferred stock	40,100,000
Series B convertible preferred stock	31,512,642
Series C convertible preferred stock	31,848,074
Warrant to purchase Series A convertible preferred stock	150,000
Restricted common stock	209,891
Stock options outstanding	29,017,305
Total	132,837,912

9. WARRANT LIABILITY

On July 10, 2020, the Company issued a warrant to purchase up to 150,000 shares of Series A convertible preferred stock with an exercise price of $1.00 per share (the "Warrant"). The Warrant has an original term to maturity of 10 years, expiring on July 10, 2030.

The assumptions that the Company used to determine the fair value of the Warrant are as follows:

	Year Ended December 31, 2024
Expected term (years)	1.5
Expected volatility	97.8%
Risk-free interest rate	4.2%
Expected dividend yield	0.0%
Fair value of Series A convertible preferred stock per share	$ 8.15

As of December 31, 2024, the Warrant remained outstanding.

10. CONVERTIBLE PREFERRED STOCK

Series A Convertible Preferred Stock – Prior to January 1, 2024, the Company entered into the Series A Preferred Stock Purchase Agreement. As part of the initial closing and subsequent closings, 40,100,000 shares of Series A convertible preferred stock were issued at $1.00 per share for cash proceeds of $40.2 million. Issuance costs associated with the Series A convertible preferred stock were less than $0.1 million.

Series B Convertible Preferred Stock – Prior to January 1, 2024, the Company entered into the Series B Preferred Stock Purchase Agreement. As part of the initial closing and subsequent closings, 31,512,642 shares of Series B convertible preferred stock were issued at $11.85 per share for cash proceeds of $373.5 million. Issuance costs associated with the Series B convertible preferred stock closings were $0.3 million.

Series C Convertible Preferred Stock – Prior to January 1, 2024, the Company entered into the Series C Preferred Stock Purchase Agreement. As part of the initial closing and subsequent closings, 23,708,840 shares of Series C convertible preferred stock were issued at $11.85 per share for cash proceeds of $281.0 million. Issuance costs associated with the Series C convertible preferred stock closings for 2023 were $0.6 million.

On October 9, 2024 and three additional dates, the last occurring on December 20, 2024, the Company sold and issued to one or more purchasers at additional closings, on the same terms and conditions as the initial closing, an aggregate of 8,139,234 additional shares of Series C convertible preferred stock for $11.85 per share and cash proceeds of $96.5 million. Issuance costs associated with the Series C convertible preferred stock closings for 2024 were $0.1 million.

On January 21, 2025, the Company sold and issued to one or more purchasers at an additional closing, on the same terms and conditions as the previous closing, an aggregate of 1,856,539 additional shares of Series C convertible preferred stock for $11.85 per share and cash proceeds of $22.0 million.

As of each balance sheet date, convertible preferred stock consisted of the following (dollars in thousands):

	December 31, 2024				
	Preferred Stock Authorized	Issued and Outstanding	Carrying Value	Liquidation Preference	Issuable Upon Conversion
Series A convertible preferred stock	40,250,000	40,100,000	$ 40,053	$ 40,100	40,100,000
Series B convertible preferred stock	31,512,642	31,512,642	373,133	447,175	31,512,642
Series C convertible preferred stock	42,194,093	31,848,074	376,667	404,752	31,848,074
	113,956,735	103,460,716	$ 789,853	$ 892,027	103,460,716

The Series A, Series B and Series C convertible preferred stock (collectively, the "Preferred Stock") have the following rights and privileges:

Dividends – The holders of the Series A convertible preferred stock are entitled to receive noncumulative dividends when and if declared by the Board. The holders of Series B and Series C convertible preferred stock are entitled to received cumulative dividends that accrued at an annual rate of $0.711 per share. Dividends are payable only when and if declared by the Board. The Company cannot declare, pay, or set aside any dividends on shares of any class of common stock, unless the holders of the Preferred Stock first receive dividends on each outstanding share of Preferred Stock in the amount equal to the greater of (i) the accrued dividends unpaid as of such date and (ii) the amount that would be due had all Preferred Stock been converted to common stock immediately prior to the dividend. As of December 31, 2024, no dividends had been declared by the Board.

Liquidation – In the event of any liquidation, dissolution or winding-up of the Company, which would include the sale of the Company, the Preferred Stock is senior to common stock. The stockholders holding shares of Preferred Stock would be entitled to preferential payment in the amount per share equal to the greater of (i) (a) for Series A convertible preferred stock, the respective original issue price and declared dividends unpaid thereon and (b) for Series B and the Series C convertible preferred stock, the original issue price plus any accrued but unpaid dividends and any declared but unpaid dividends or (ii) the amount that would be due had all Preferred Stock been converted to common stock immediately prior to the deemed liquidation event.

Voting – The stockholders holding shares of Preferred Stock are entitled to the number of votes equal to the number of shares of common stock into which the shares of Preferred Stock held by each holder are then convertible.

Conversion – Each share of Preferred Stock is convertible at any time at the option of the holder. The number of shares into which the Preferred Stock converts is equal to the original issuance price of such series of Preferred Stock divided by the respective series' conversion price. The conversion price shall initially be $1.00, $11.85 and $11.85 per share for the Series A, Series B and Series C convertible preferred stock, respectively, and may be adjusted for certain dilutive events. Conversion to common stock shall be mandatory upon the closing of an initial public offering resulting in gross proceeds of at least $50.0 million or upon the decision of the holders of at least a majority of the outstanding shares of Preferred Stock.

11. COMMON STOCK

As of December 31, 2024, the Company had authorized 195,956,735 shares of common stock. The voting, dividend and liquidation rights of the holders of the Company's common stock is subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock as set forth above.

As of December 31, 2024, the Company had reserved 135,952,052 shares for the conversion of outstanding shares of Preferred Stock, the exercise of outstanding stock options, the vesting of restricted common stock, the number of shares remaining available for grant under the Company's 2019 Equity Incentive Plan (see Note 12) and the exercise of the outstanding Warrant (see Note 9).

	December 31, 2024
Series A convertible preferred stock outstanding	40,100,000
Series B convertible preferred stock outstanding	31,512,642
Series C convertible preferred stock outstanding	31,848,074
Stock options outstanding under the 2019 Plan	29,017,305
Shares reserved for future issuance under the 2019 Plan	3,114,140
Shares reserved for exercise of outstanding Warrant	150,000
Shares reserved for vesting of restricted common stock	209,891
Total shares of common stock reserved for issuance	135,952,052

12. STOCK-BASED COMPENSATION

2019 Equity Incentive Plan

During 2019, the Company adopted the 2019 Equity Incentive Plan, as amended (the "2019 Plan"). The 2019 Plan provided for the issuance of up to 44,000,000 shares of common stock as of December 31, 2024, to employees, officers, directors, consultants, and advisors in the form of non-qualified and incentive stock options, restricted stock awards, and other stock-based awards. Options typically vest over four years and have a maximum term of 10 years. As of December 31, 2024, there were 3,114,140 shares of common stock available for issuance under the 2019 Plan.

Stock Option Valuation

The Company typically grants stock options to employees and non-employees at exercise prices deemed by the Board to be equal to the fair value of the common stock at the time of grant. The fair value of the common stock has been determined by the Board at each measurement date based on the results obtained from independent third-party appraisals.

The Company utilized the Black-Scholes OPM to estimate the fair value of stock options awarded to employees, officers, directors, consultants and advisors. The Black-Scholes OPM requires several key assumptions. The assumptions that the Company used to determine the grant-date fair value of options granted to employees, non-employees and directors were as follows, presented on a weighted-average basis:

	Year Ended December 31, 2024
Expected term (in years)	6.0
Expected volatility	84.8%
Risk-free interest rate	4.1%
Expected dividend yield	—
Fair value of underlying common stock	$ 4.83

As of December 31, 2024, there was $38.9 million of unrecognized compensation expense, related to unvested time-based stock options that will be recognized over a weighted-average remaining term of 2.6 years.

Prior to January 1, 2024, the Company issued stock options covering 959,500 shares of common stock subject to the performance condition of entering into one or more strategic transactions pursuant to which the Company has the right to receive, in the aggregate, at least $200.0 million in specified payments. During the year ended December 31, 2022, the vesting of stock options covering 239,875 shares of stock with this performance condition was accelerated following the signing of the Amgen Collaboration Agreement in recognition of performance that did not otherwise achieve the performance condition. During the year ended December 31, 2024, the vesting of stock options covering 239,875 shares of common stock with this performance condition was accelerated following the signing of the Novartis Collaboration Agreement in recognition of performance that did not otherwise achieve the performance condition. The balance of shares of common stock (479,750) underlying these stock options

remains outstanding. No stock-based compensation expense has been recorded on the remaining unvested stock options as the performance conditions are not deemed probable of occurrence.

During the year ended December 31, 2024, the Company issued stock options covering 100,000 shares of common stock subject to the performance condition of entering into one or more strategic transactions pursuant to which the Company has the right to receive, in the aggregate, at least $50.0 million in specified payments. Additionally, the Company issued stock options covering 100,000 shares of common stock subject to the performance condition of entering into one or more strategic transactions pursuant to which the Company has the right to receive, in the aggregate, at least $100.0 million in specified payments. Any unvested shares underlying both stock option grants will lapse and be forfeited as of January 1, 2025. In December 2024, both of these option grants were modified to extend their vesting period to January 1, 2026 and to exclude the Novartis Collaboration Agreement from counting in the guaranteed payments used to determine if the performance criteria are met. During the year ended December 31, 2024, no shares of common stock underlying these options vested.

The following table summarizes the option activity under the 2019 Plan:

	Options	Weighted Average Exercise Price per Unit	Weighted Average Remaining Life (in Years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2023	26,881,245	$ 3.12	8.5	$ 44,334
Granted	6,285,575	4.83		
Exercised	(827,950)	1.36		
Forfeited/Expired	(3,321,565)	4.15		
Outstanding at December 31, 2024	29,017,305	$ 3.42	7.8	$ 43,775
Exercisable at December 31, 2024	15,128,361	$ 2.64	7.2	$ 34,573

During the year ended December 31, 2024, the Company granted stock options to purchase an aggregate of 6,285,575 shares, at weighted average grant date fair values per option share of $3.56.

The aggregate intrinsic value of options exercised during the year ended December 31, 2024 was $2.9 million. The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock.

Restricted Common Stock

During the year ended December 31, 2021, the Company issued 3,358,250 shares of restricted common stock to certain directors, executive officers and founders, subject to a time-based service condition. No restricted common stock was issued during the year ended December 31, 2024.

The grantees paid their respective subscription price on the grant date, which was the fair value of the common stock. The consideration received was recorded as a restricted stock repurchase liability. The relevant consideration paid will be transferred into common stock par value and additional paid in capital once the restricted common stock vested. As of December 31, 2024, the outstanding balance of the restricted stock repurchase liability was less than $0.1 million.

The following table summarizes the Company's restricted common stock activity for the year ended December 31, 2024:

	Number of Restricted Stock
Issued and unvested as of December 31, 2023	1,049,454
Vested	(839,563)
Issued and unvested as of December 31, 2024	209,891

The Company recorded stock-based compensation expense in the following expense categories of its consolidated statement of operations and comprehensive loss:

	Year Ended December 31, 2024
Research and development	$ 9,114
General and administrative	10,351
	$ 19,465

13. LICENSE AGREEMENT

Agreement with Immune Biosolutions, Inc. ("IBIO")

In June 2023, the Company entered into a License Agreement with IBIO, pursuant to which the Company licensed certain technologies in the intravenous, intramuscular and subcutaneous delivery field in exchange for a license of certain technologies in the inhaled field, in each case, related to the development of a SARS-CoV-2-specific antibody (the "IBIO License Agreement"). Pursuant to the IBIO License Agreement, the Company paid IBIO an upfront license fee of $0.1 million and each of the parties thereto have agreed to pay each other a low single digit royalty based on net sales of licensed products. No research and development expense was recognized during the year ended December 31, 2024.

14. INCOME TAXES

The Company recorded $0.2 million of a tax provision for the year ended December 31, 2024.

(in thousands)	Year Ended December 31, 2024
Current expense (benefit)	
Federal	$ —
State	212
Foreign	—
Total current expense (benefit)	212
Total income tax expense (benefit)	$ 212

A reconciliation of the Company's statutory income tax rate to the Company's effective income tax rate is as follows:

	Year Ended December 31, 2024
Income at U.S. statutory rate	21.00%
State taxes, net of federal tax benefit	7.27%
Permanent differences	-0.98%
Tax credits	4.04%
Other	-0.52%
Valuation allowance	-30.93%
	-0.12%

The Company's effective tax rate differs from the federal statutory rate primarily due to the tax expense impact of nondeductible equity compensation and other permanent differences, tax credits, state taxes and valuation allowance.

The net deferred income tax asset balance related to the following (in thousands):

	Year Ended December 31, 2024
Deferred Tax Assets:	
Deferred revenue	$ 3,061
Lease liability	16,420
Net operating loss carryforwards	37,948
Tax credits	24,461
Accruals and other	8,461
Amortization	199
Section 174 R&D costs	75,931
Deferred tax assets before valuation and allowance	166,481
Valuation allowance	(147,889)
Net total deferred tax assets	18,592
Deferred Tax Liabilities:	
Right of use asset	(16,896)
Depreciation	(1,696)
Total deferred tax liabilities	(18,592)
Net deferred tax assets (liabilities)	$ —

As of December 31, 2024, the Company had a federal net operating loss (“NOL”) carryforward of approximately $137.5 million, all of which was available to offset future income tax liabilities indefinitely. As of December 31, 2024, the Company had state NOL carryforwards of approximately $143.8 million. The Company also had U.S. federal research and development tax credit carryforwards of $16.6 million available to offset future U.S. federal income taxes, which expire at various times through 2040. As of December 31, 2024, the Company had state tax credit carryforwards of $9.9 million which expire at various times through 2044.

The utilization of NOLs and tax credit carryforwards to offset future taxable income may be subject to an annual limitation as a result of ownership changes that have occurred previously or may occur in the future. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (“IRC”), a corporation that undergoes an ownership change may be subject to limitations on its ability to utilize its pre-change NOLs and other tax attributes otherwise available to offset future taxable income and/or tax liability. An ownership change is defined as a cumulative change of 50% or more in the ownership positions of certain stockholders during a rolling three-year period. The Company conducted an ownership analysis under IRC Section 382 as of January 31, 2025, and determined the Company experienced an ownership change event on September 2, 2021 that would limit the Company’s utilization of its NOLs and tax credits. The Company maintains a valuation allowance against deferred tax assets that are not expected to be realized, including those limited by Section 382.

The Tax Cuts and Jobs Act of 2017 (“TCJA”) requires taxpayers to capitalize and amortize research and development expenditures, resulting in capitalized costs to date of $375.2 million as of December 31,2024. We will amortize these costs for tax purposes over five years for research and development performed in the U.S. and over 15 years for research and development performed outside the U.S.

ASC 740 requires a valuation allowance to reduce the deferred tax assets reported if, based on the weight of the evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized. After consideration of all the evidence, both positive and negative, the Company has recorded a valuation allowance against its deferred tax assets at December 31, 2024, because the Company’s management has determined that it is more likely than not that these assets will not be fully realized. The increase in the valuation allowance of $53.7 million in 2024 primarily relates to the net loss incurred by the Company and capitalized research and development costs.

A reconciliation of the valuation allowance is as follows (in thousands):

	Year Ended December 31, 2024
Balance at beginning of year	$ 94,228
Net charges to expense	53,661
Balance at end of year	$ 147,889

The Company accounts for uncertainty in income taxes under the provisions of ASC 740 which defines the thresholds for recognizing the benefits of tax return positions in the financial statements as "more likely than not" to be sustained by the taxing authority. The tax benefit is measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. As of December 31, 2024, the Company had recorded no unrecognized tax benefits.

The Company's policy is to recognize both interest and penalties related to unrecognized tax benefits as a component of income tax expense. As of December 31, 2024, there were no interest or penalties associated with unrecognized tax benefits.

The Company files income tax returns in the United States and various states. The Company has been notified by the IRS of their intention to audit the federal income tax return for the year ended December 31, 2023.

The tax years 2021 through present remain open to examination by major taxing jurisdictions to which the Company is subject to, which are primarily in the United States.

15. LEASES

Operating Leases

In June 2021, the Company entered into a lease agreement for office space at a building located in Somerville, MA. The lease commenced May 11, 2022 and is set to expire June 30, 2032. The Company is entitled to two options to extend the lease term for five years each. The option to extend the lease term is not reflected in the right-of-use asset and lease liability as it is not reasonably certain of being exercised. Under the terms of the lease, the Company provided a security deposit of approximately $2.9 million to the landlord, in the form of a letter of credit, which is classified as restricted cash within other assets on the consolidated balance sheet.

In October 2021, the Company entered into a lease agreement for office and laboratory space at a building located in Andover, MA. The lease commenced November 1, 2021 and is set to expire October 31, 2026. Under the terms of the lease, the Company provided a security deposit of approximately $0.8 million to the landlord, in the form of a letter of credit, which is classified as restricted cash within other assets on the consolidated balance sheet. On December 30, 2024, the Company entered into the First Amendment to the Lease Agreement (the "First Amendment") to extend the term of the Lease Agreement through December 31, 2034. The First Amendment provides an early termination option allowing the Company to terminate the Lease Agreement on or after December 31, 2031.

Finance Leases

In 2023, the Company entered into finance lease agreements for the purchase of lab equipment with a fair value of $10.3 million. The leases are payable over 36 to 60 months with an upfront payment $0.9 million. No additional finance lease agreement was entered into in 2024.

The following table summarizes the Company's costs included in consolidated statement of operations and comprehensive loss related to operating leases and finance leases the Company has entered into through December 31, 2024:

	Year Ended December 31, 2024
Finance lease cost	
Amortization of right-of-use assets	$ 8,519
Interest on lease liabilities	2,117
Operating lease cost	10,146
Variable lease cost	6,044
Short-term lease cost	14
Total lease cost	$ 26,840
Other information	
Operating cash flows used for finance leases	$ 2,117
Financing cash flows used for finance leases	$ 11,124
Operating cash flows used for operating leases	$ 9,691
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 18,648
Right-of-use assets obtained in exchange for new finance lease liabilities	$ —
Weighted-average remaining lease term – finance leases	2.95 years
Weighted-average remaining lease term – operating leases	8.52 years
Weighted-average discount rate – finance leases	10.85%
Weighted-average discount rate – operating leases	9.81%

Pursuant to the terms of the Company's non-cancelable lease agreements in effect at December 31, 2024, the following table summarizes the Company's maturities of lease liabilities as of December 31, 2024 (in thousands):

	Finance Lease	Operating Lease
2025	$ 9,303	$ 8,184
2026	4,525	10,371
2027	3,278	10,666
2028	150	10,970
2029	—	11,282
Thereafter	—	41,733
Total lease payments	$ 17,256	$ 93,206
Less: imputed interest	(1,877)	(31,613)
Present value of lease liabilities	$ 15,379	$ 61,593

16. COMMITMENTS AND CONTINGENCIES

Legal Proceedings – The Company is not currently party to any material legal proceedings. At each reporting date, the Company evaluates whether or not a potential loss amount or a potential range of loss is probable and reasonably estimable under the provisions of the authoritative guidance that addresses accounting for contingencies. The Company expenses as incurred the costs related to such legal proceedings.

17. RELATED-PARTY TRANSACTIONS

In August 2018, the Company entered into a ten-year management service agreement with Flagship Pioneering, Inc. ("Flagship Pioneering") to provide management services, including accounting, human resources, information technology, legal, and consultation. The Company also agreed to reimburse Flagship Pioneering for certain expenses, including insurance and benefits, partner and related fees, software licenses, supplies, and administration consulting services incurred on the Company's behalf. The Company recorded general and administrative expense totaling $1.0 million related to these services for the year ended December 31, 2024. As of December 31, 2024, the Company owed $0.2 million to Flagship.

In July 2022, the Company entered into a Vivarium Shared Space Operating Agreement, as amended in May 2024, with Cellarity, Inc. ("Cellarity"), an affiliated with Flagship, to use a vivarium space,

along with other companies affiliated with Flagship. The Company pays Cellarity a monthly operating fee for using the vivarium and obtaining various services; the shared cost is variable depending on the actual usage. The Company recognized less than $0.6 million expense paid to Cellarity during the year ended December 31, 2024. As of December 31, 2024, the Company had $0.1 million outstanding in accounts payable to Cellarity.

In August 2021, the Company entered into an agreement (the "Flagship Agreement"), with Flagship Pioneering Innovations VI, LLC ("Flagship"), pursuant to which it (i) irrevocably and unconditionally assigned to Flagship all of the Company's right, title and interest in and to certain foundational patent rights conceived prior to the Company's launch, which is defined as the closing of its Series B financing, and its improvements to such patent rights that cannot be practiced without infringing the foregoing patent rights (such patent rights and improvements, the "Foundational IP"), and (ii) obtained an exclusive, worldwide, royalty-bearing, sublicensable, transferable license from Flagship under such Foundational IP to develop, manufacture and commercialize any product or process or component thereof in the licensed field of human therapeutics and vaccines that would, absent the license granted to the Company by Flagship, infringe at least one valid claim of the Foundational IP. Pursuant to the Flagship Agreement, the Company is obligated to use commercially reasonable efforts to diligently exploit licensed products in the licensed field and maintain such efforts during the term of the Flagship Agreement, including by spending at least $1.0 million each year on development and commercialization activities with respect to licensed products during the term of the Flagship Agreement and at least $10.0 million on such activities until August 2026. The Company is also obligated to pay Flagship, on a licensed product-by-licensed product and jurisdiction-by-jurisdiction basis, royalties equal to a low single-digit percentage on net sales of licensed products by the Company or its sublicensees until the expiration of the last valid claim of any Foundational IP covering such licensed product in such jurisdiction. To date, there have been no amounts paid or received by the Company under the Flagship Agreement.

In June 2023, the Company entered into a Collaboration Agreement with Pioneering Medicines 02, Inc., a company newly formed and controlled by Flagship Labs VII, LLC and Flagship Pioneering Fund VII, L.P., each of which are affiliated with Flagship Pioneering. See Note 18.

18. VARIABLE INTEREST ENTITIES

On June 22, 2023, the Company entered into a collaboration agreement (the "PMCo Agreement"), with Pioneering Medicines 02, Inc. ("PMCo"), an affiliate of Flagship Pioneering, pursuant to which PMCo was granted an exclusive, worldwide, royalty-free, sublicensable license under certain of the Company's patent rights and know-how to develop, manufacture and commercialize licensed products containing certain antibodies against TSLP and/or IL-4Rα, including GB-0895, in all fields. During the period from the effective date until June 2030, neither the Company nor any of its affiliates may develop or commercialize, nor collaborate with, enable or otherwise authorize, license or grant any right to any third-party to develop or commercialize, any antibody that (i) binds to TSLP, (ii) binds to both TSLP and IL-4Rα (but no other target), or (iii) binds to IL-4Rα (and no other target, including TSLP) in the territory. Subject to the license to PMCo, as between the parties, the Company will solely own and retain all right, title and interest in and to all technology, know-how and materials conceived, discovered, developed or otherwise made by or on behalf of PMCo or any of its affiliates or sublicensees in the course of performing activities under or in connection with the PMCo Agreement, and any patents or patent applications claiming any of the developed know-how.

Under the terms of the PMCo Agreement, the Company and PMCo will collaborate on research and development activities with respect to the licensed products and will share research and development costs, with the Company bearing 65% and PMCo bearing 35% of all fully-burdened research costs and development expenses, which percentage commitments are subject to adjustment if we or PMCo fail to pay or wish to reduce our respective percentage commitments prior to the consummation of a business combination of PMCo or a license transaction of all commercial rights for all licensed products. In addition, the Company is entitled to 70% and PMCo is entitled to 30% of the proceeds of a business combination of PMCo or an exclusive license transaction with a third-party; provided, however, that the failure by any party to bear their agreed portion of the fully-burdened research costs and development expenses shall result in an automatic *pro rata* adjustment of such party's interest in any such proceeds and that such failure shall not automatically be deemed to constitute a breach of the PMCo Agreement.

Subject to the terms and conditions of the PMCo Agreement, the Company is obligated to use commercially reasonable efforts to develop licensed products in the licensed field in the territory, including by the way of directing PMCo under the PMCo Agreement, and upon receipt of regulatory approval for a licensed product in a country, PMCo will be obligated to use commercially reasonable efforts to commercialize such licensed product in such country.

Following the first achievement of a specified regulatory milestone, and prior to a business combination of PMCo or a license transaction of all commercial rights for all licensed products, (i) we have the right to acquire all of the securities of PMCo for a price equal to a low double digit percentage of the fair market value of such securities on terms and conditions to be negotiated between us and PMCo, and if we do not exercise such right, we have the right to initiate a business combination of PMCo or an exclusive license transaction with a third party; and (ii) PMCo has the right to have us acquire all of the securities of PMCo in exchange for royalties equal to a mid-to-high single-digit percentage on net sales of licensed products on a country-by-country and licensed product-by-licensed product basis until the later of (a) the expiration of the last to valid claim of any patent right controlled by us or PMCo covering the use or sale of such licensed product in such country, (b) expiration of regulatory exclusivity for such product in such country, and ten years following the first commercial sale of such licensed product in such country (such transactions in (i) and (ii), collectively, the "Subject Transactions"). Concurrently with the PMCo Agreement, we, PMCo and Pioneering Medicines 02, LLC ("PM LLC"), the sole stockholder of PMCo, entered into a drag-along agreement, pursuant to which PM LLC agreed to, among other things, vote in favor of a Subject Transaction.

The Company consolidated PMCo, which is deemed to be VIE and of which the Company is the primary beneficiary based on a combination of the decision-making power over the activities that most significantly impact the economic performance of PMCo and an obligation to absorb losses or receive benefits from PMCo. These decisions and significant activities include, but are not limited to, research and development activities under the research plan and the development plan and other operational and strategic matters. The terms of the agreements governing PMCo prohibit the Company from using the assets of PMCo to satisfy the obligations of other entities.

The PMCo Agreement is being treated as an asset acquisition as PMCo's assets transferred do not meet the definition of a business. Prior to the acquisition, PMCo's majority stockholder was the same as the Company's majority stockholder and there was common ownership and control, including common members of the Board. As such, the Company accounted for the asset acquisition as a transaction between entities under common control. The Company initially measured and recognized the assets and liabilities transferred at their carrying amounts in the accounts of PMCo at the date of transfer. Accordingly, the Company recognized non-controlling interest ("NCI") based on the net assets held by PMCo. As a result of PMCo's preferred stock being redeemable upon a deemed liquidation event and its put right, the NCI in PMCo is presented in mezzanine equity.

The net assets acquired on June 30, 2023, included cash totaling $0.6 million and liabilities totaling $2.1 million, comprised primarily of accounts payable and accrued liabilities.

The following table below presents the assets and liabilities (excluding intercompany balances that were eliminated in consolidation) as of December 31, 2024 (in thousands):

	Year Ended December 31, 2024
Assets	
Current Assets:	
Restricted cash and cash equivalents (VIE)	$ 1,427
Total current assets	1,427
Total assets	$ 1,427
Liabilities	
Current liabilities	
Accrued expenses and other current liabilities	$ 86
Total current liabilities	86
Total liabilities	$ 86

The Company has recorded PMCo's cash and cash equivalents as "Restricted cash and cash equivalents (VIE)" because (i) the Company does not have any interest in or control over PMCo's cash and cash equivalents and (ii) the Company's agreements with PMCo do not provide for PMCo's cash and cash equivalents to be used for the development of the assets that the Company licensed from PMCo. Assets recorded as a result of consolidating PMCo's financial condition into the Company's balance sheets do not represent additional assets that could be used to satisfy claims against the Company's general assets.

The net losses attributable to non-controlling interest holders is the loss absorbed by the holders of the ownership interest of PMCo, which consist primarily of research and development costs that were

reimbursed by PMCo under the PMCo Agreement and amounted to $7.6 million during the year ended December 31, 2024.

19. DEFINED CONTRIBUTION PLAN

The Company has established a defined contribution 401(k) Savings Plan (the "Generate 401(k) Plan") which allows eligible employees to contribute from 1% to 90% of their compensation, subject to certain statutory limitations. The Generate 401(k) Plan permits discretionary matching contributions by the Company to participant accounts. In 2024, the Company paid, in the form of cash, matching contributions to participant accounts of approximately $1.9 million.

20. SEGMENT INFORMATION

The Company has one operating segment. The Company's operating segment is engaged in the field of generative biology by using machine learning for drug discovery and development through the programming of novel protein therapeutics. The Company's chief operating decision maker, its Chief Executive Officer, manages the Company's operations on a consolidated basis for the purposes of assessing performance and allocating resources based on net loss attributable to Generate Biomedicines, Inc. stockholders that also is reported on the consolidated statement of operations as consolidated net loss to Generate Biomedicines, Inc. stockholders. This financial metric is used by the chief operating decision maker ("CODM") to make key operating decisions such as the allocation of capital between program expenses, early-stage discovery expenses, and general and administrative expense, including headcount and facilities decisions. The operating segment's revenue is derived from multiple collaboration agreements from which the segment licenses certain development or product candidates and performs research and development services. The measure of segment assets is reported on the balance sheet as total consolidated assets. All of the Company's long-lived assets are held in the United States. The following table presents selected financial information about the Company's single operating segment for the year ended December 31, 2024 (amounts in thousands):

	Year Ended December 31 2024
Revenue:	
Collaboration revenue	$ 20,459
Operating Expenses[(a)]:	
Research and development personnel-related (excluding equity-based compensation)	65,292
External research and development costs – GB-0895	17,443
External – discovery related costs and other	68,459
General and administrative personnel-related (excluding equity-based compensation)	17,515
External – General and administrative	13,875
Equity-based compensation expense	19,465
Depreciation expense	15,349
Other segment expenses[(b)]	233
Interest income	(18,118)
Interest expense	2,118
Provision for income taxes	212
Consolidated net loss	$ 181,384
Net loss attributable to non-controlling interests	7,613
Consolidated net loss attributable to Generate Biomedicines, Inc. stockholders	$ 173,771

(a) The significant expense categories and amounts align with the segment-level information that is regularly provided to the CODM.
(b) Other segment expenses include change in fair value of preferred stock warrant liability and foreign currency exchange loss.

21. SUBSEQUENT EVENTS

The Company has evaluated subsequent events through December 23, 2025, which is the date the financial statements were available to be issued. No subsequent events were identified besides those disclosed in notes.

Shares

Generate:Biomedicines

Common Stock

Preliminary Prospectus

Goldman Sachs & Co. LLC **Morgan Stanley**

Until , 2026 (25 days after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

, 2026

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Unless otherwise indicated, all references to "Generate," the "company," "we," "our," "us" or similar terms refer to Generate Biomedicines, Inc. and its wholly owned subsidiary, or either or both of them as the context may require.

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all expenses to be paid by us, other than underwriting discounts and commissions, in connection with this offering. All amounts shown are estimates except for the Securities and Exchange Commission ("SEC") registration fee, the Financial Industry Regulatory Authority, Inc. ("FINRA") filing fee and The Nasdaq Stock Market ("Nasdaq") listing fee.

SEC registration fee	$	*
FINRA filing fee		*
Nasdaq listing fee		*
Printing and mailing expenses		*
Legal fees and expenses		*
Accounting fees and expenses		*
Custodian transfer agent and registrar fees and expenses		*
Miscellaneous expenses		*
Total	$	*

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law (the "DGCL") authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact that they have served or are currently serving as a director or officer to a corporation. The indemnity may cover expenses (including attorneys' fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys' fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

We will adopt provisions in our amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, and the amended and restated bylaws, which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part, that limit or eliminate the personal liability of our directors to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended. Consequently, a director will not be personally liable to us or our stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any unlawful payments related to dividends or unlawful stock purchases, redemptions or other distributions; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission.

In addition, our amended and restated bylaws will provide that:

- we will indemnify our directors, officers and, in the discretion of the Company's board of directors (the "Board"), certain employees to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended; and
- we will advance reasonable expenses, including attorneys' fees, to our directors and, in the discretion of our Board, to our officers and certain employees, in connection with legal proceedings relating to their service for or on behalf of us, subject to limited exceptions.

We have entered into indemnification agreements with each of our directors and intend to enter into such agreements with our executive officers. These agreements provide that we will indemnify each of our directors, our executive officers and, at times, their affiliates to the fullest extent permitted by Delaware law. We will advance expenses, including attorneys' fees (but excluding judgments, fines and settlement amounts), to each indemnified director, executive officer or affiliate in connection with any proceeding in which indemnification is available and we will indemnify our directors and officers for any action or proceeding arising out of that person's services as a director or officer brought on behalf of us or in furtherance of our rights. Additionally, certain of our directors or officers may have certain rights to indemnification, advancement of expenses or insurance provided by their affiliates or other third-parties, which indemnification relates to and might apply to the same proceedings arising out of such director's or officer's services as a director referenced herein. Nonetheless, we have agreed in the indemnification agreements that our obligations to those same directors or officers are primary and any obligation of such affiliates or other third-parties to advance expenses or to provide indemnification for the expenses or liabilities incurred by those directors are secondary.

We also maintain general liability insurance which covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act of 1933, as amended (the "Securities Act").

The underwriting agreement filed as Exhibit 1.1 to this registration statement provides for indemnification of us and our directors and officers by the underwriters against certain liabilities under the Securities Act and the Securities Exchange Act of 1934.

Item 15. Recent Sales of Unregistered Securities.

Set forth below is information regarding securities we have issued within the past three years that were not registered under the Securities Act.

(a) Issuances of Capital Stock

Between May 9, 2023 and January 21, 2025, we issued and sold an aggregate of 33,704,613 shares of our Series C convertible preferred stock for a purchase price of $11.85 per share, for an aggregate purchase price of approximately $399.4 million.

The offers, sales and issuances of the securities described above were deemed to be exempt under Section 4(a)(2) of the Securities Act or Rule 506 of Regulation D under the Securities Act as a transaction by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions was an accredited investor within the meaning of Rule 501 of Regulation D under the Securities Act and had adequate access, through employment, business or other relationships, to information about us. No underwriters were involved in these transactions.

(b) Grants and Exercises of Stock Options

Since January 1, 2022, we have granted to certain of our directors, employees and consultants options to purchase 32,919,302 shares of our common stock at a $4.72 per share weighted average exercise price under the 2019 Plan. Since January 1, 2022, 2,563,988 shares of common stock have been issued upon the exercise of stock options pursuant to the 2019 Plan.

The offers, sales and issuances of the securities described above were deemed to be exempt from registration under Rule 701 promulgated under the Securities Act as transactions under compensatory benefit plans and contracts relating to compensation, or under Section 4(a)(2) of the Securities Act as a transaction by an issuer not involving a public offering. The recipients of such securities were our directors, employees or bona fide consultants and received the securities under our equity incentive plans. Appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions had adequate access, through employment, business or other relationships, to information about us.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

Exhibit Number	Description
1.1*	Form of Underwriting Agreement.
3.1	Amended and Restated Certificate of Incorporation, as currently in effect.
3.2*	Form of Second Amended and Restated Certificate of Incorporation, to be in effect immediately prior to the completion of this offering.
3.3	Bylaws, as currently in effect.
3.4*	Form of Amended and Restated Bylaws, to be in effect as of the effectiveness of the registration statement of which this prospectus forms a part.
4.1*	Specimen Common Stock Certificate.
4.2	Warrant to Purchase Common Stock, dated July 10, 2020, by and between the Registrant and Pacific Western Bank.
4.3*+	Amended and Restated Investors' Rights Agreement, by and between the Registrant and certain of its stockholders, dated as of May 9, 2023.
5.1*	Opinion of Goodwin Procter LLP.
10.1#	2019 Equity Incentive Plan, as amended, and form of award agreements thereunder.
10.2*#	Generate Biomedicines, Inc. 2026 Stock Option and Incentive Plan and form of award agreements thereunder.
10.3*#	Generate Biomedicines, Inc. 2026 Employee Stock Purchase Plan.
10.4*#	Form of Indemnification Agreement by and between the Registrant and its director and executive officers.
10.5*#	Senior Executive Cash Incentive Bonus Plan.
10.6*#	Executive Severance Plan.
10.7*#	Non-Employee Director Compensation Policy.
10.8*#	Compensation Recovery Policy.
10.9*†+	Collaboration and License Agreement, by and between the Registrant and Novartis Pharma AG, dated as of September 19, 2024.
10.10*†+	Collaboration Agreement, by and between Amgen Inc. and the Registrant, dated as of August 30, 2021.
10.11*†+	License Agreement, by and between Flagship Pioneering Innovations VI, LLC and the Registrant, dated as of December 24, 2021, as amended on October 5, 2022, December 12, 2023, and October 9, 2024.
10.12*†+	Collaboration Agreement, by and between the Registrant and Pioneering Medicines 02, Inc., dated as of June 22, 2023.
10.13*#+	Offer Letter, by and between Flagship Pioneering, Inc. and Michael Nally, dated as of March 2, 2021.
10.14#+	Offer Letter, by and between the Registrant and Jason Silvers, dated as of March 31, 2022.
10.15*+	Lease, by and between 101 South Street, Owner, LLC, and the Registrant, dated as of June 30, 2021.

Exhibit Number	Description
10.16+	Lease, by and between IQHQ-4 Corporate, LLC and the Registrant, dated as of October 29, 2021.
21.1	Subsidiaries of Registrant.
23.1*	Consent of Ernst & Young LLP, independent registered public accounting firm.
23.2*	Consent of Goodwin Procter LLP (included in Exhibit 5.1).
24.1*	Power of Attorney.
107*	Filing Fee Table.

* To be filed by amendment.
\# Indicates a management contract or any compensatory plan, contract or arrangement.
† Certain portions of this document that constitute confidential information have been redacted pursuant to Item 601(b)(10) of Regulation S-K.
\+ Certain exhibits and schedules to these agreements have been omitted pursuant to Item 601(a)(5) and (6) of Regulation S-K. The registrant will furnish copies of any of the exhibits and schedules to the Securities and Exchange Commission upon request.

(b) Financial Statement Schedules.

All financial statement schedules are omitted because the information required to be set forth therein is not applicable or is shown in the audited consolidated financial statements or the notes thereto.

Item 17. Undertakings.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The registrant hereby undertakes that:

(a) The Registrant will provide to the underwriter at the closing as specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.

(b) For purposes of determining any liability under the Securities Act, as amended, the information omitted from a form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in the form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act, as amended, shall be deemed to be part of this registration statement as of the time it was declared effective.

(c) For the purpose of determining any liability under the Securities Act, as amended, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Somerville, Massachusetts, on the of , 2026.

GENERATE BIOMEDICINES, INC.

By _____
Name: Michael Nally, M.B.A.
Title: President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

Each individual whose signature appears below hereby constitutes and appoints Michael Nally, M.B.A., and Jason Silvers, M.D., J.D., as such person's true and lawful attorney-in-fact and agent with full power of substitution and resubstitution, for such person in such person's name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement (or any Registration Statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission granting unto each said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that any said attorney-in-fact and agent, or any substitute or substitutes of any of them, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement and Power of Attorney has been signed by the following person in the capacities and on the date indicated.

Signature	Title	Date
Michael Nally, M.B.A.	President, Chief Executive Officer and Director (*Principal Executive Officer*)	, 2026
Jason Silvers, M.D., J.D.	Chief Financial Officer (*Principal Financial and Accounting Officer*)	, 2026
Noubar Afeyan, Ph.D.	Chair of the Board of Directors	, 2026
Frances H. Arnold, Ph.D.	Director	, 2026
Stéphane Bancel, M.B.A.	Director	, 2026
Marsha H. Fanucci, M.B.A.	Director	, 2026
Jane L. Mendillo, M.B.A.	Director	, 2026
Paul Parker, M.B.A.	Director	, 2026
Nancy A. Simonian, M.D.	Director	, 2026
Rupert Vessey, B.M. B.Ch., D.Phil., FRCP	Director	, 2026

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF GENERATE BIOMEDICINES, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Generate Biomedicines, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "**General Corporation Law**"),

DOES HEREBY CERTIFY:

1. That the name of this corporation is Generate Biomedicines, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on August 20, 2018 under the name Flagship VL56, Inc.

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the Amended and Restated Certificate of Incorporation of this corporation, as amended, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Amended and Restated Certificate of Incorporation of this corporation, as amended, be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Generate Biomedicines, Inc. (the "**Corporation**").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, in the City of Wilmington, County of New Castle, Zip Code 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is 268,958,196 consisting of (i) 171,879,098 shares of Common Stock, $0.001 par value per share ("**Common Stock**"), and (ii) 97,079,098 shares of Preferred Stock, $0.001 par value per share ("**Preferred Stock**").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings); provided, however, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to this Amended and Restated Certificate of Incorporation that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to this Amended and Restated Certificate of Incorporation or pursuant to the General Corporation Law. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of this Amended and Restated Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

40,250,000 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A Preferred Stock**" with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations, 31,512,642 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series B Preferred Stock**" with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations and 25,316,456 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series C Preferred Stock**" with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to "Sections" or "Subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends. From and after the date of the issuance of any shares of Series B Preferred Stock, dividends at the rate per annum of $0.711 per share with respect to Series B Preferred Stock, shall accrue on shares of Series B Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock) (the "**Series B Accruing Dividends**"). From and after the date of the issuance of any shares of Series C Preferred Stock, dividends at the rate per annum of $0.711 per share with respect to Series C Preferred Stock, shall accrue on shares of Series C Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock) (the "**Series C Accruing Dividends**" and together with the Series B Accruing Dividends, the "**Accruing Dividends**"). Accruing Dividends shall accrue from day to day, whether or not declared, and shall be cumulative; provided, however, that except as set forth in the

following sentence of this Section 1 or in Section 2.1, such Accruing Dividends shall be payable only when, as, and if declared by the Board of Directors and the Corporation shall be under no obligation to pay such Accruing Dividends. The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in this Amended and Restated Certificate of Incorporation) the holders of the Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Preferred Stock in an amount at least equal to the greater of (i) the amount of the aggregate Accruing Dividends then accrued on such share of Preferred Stock and not previously paid, as applicable and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of the applicable series of Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of the applicable series of Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of the applicable series of Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (2) multiplying such fraction by an amount equal to the Series A Original Issue Price (as defined below), the Series B Original Issue Price (as defined below) or the Series C Original Issue Price (as defined below), as the case may be; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Preferred Stock pursuant to this Section 1 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest dividend to the Preferred Stock. The "**Series A Original Issue Price**" shall mean $1.00 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock. The "**Series B Original Issue Price**" shall mean $11.85 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock. The "**Series C Original Issue Price**" shall mean $11.85 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock. The term "**Applicable Original Issue Price**" shall mean the then current Series A Original Issue Price, Series B Original Issue Price or Series C Original Issue Price, as the case may be.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the holders of shares of Preferred Stock then outstanding shall be entitled to be paid, on a *pari passu* basis, out of the assets of the Corporation available for distribution to its stockholders, and in the event of a Deemed Liquidation Event (as defined below), the holders of shares of Preferred Stock then outstanding shall be entitled to be paid, on a *pari passu* basis, out of the consideration payable to

stockholders in such Deemed Liquidation Event or out of the Available Proceeds (as defined below), as applicable, before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to (i) in the case of the Series A Preferred Stock, the greater of (A) the Series A Original Issue Price, plus any dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series A Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this clause (i) is hereinafter referred to as the "**Series A Liquidation Amount**"), (ii) in the case of the Series B Preferred Stock, the greater of (A) the Series B Original Issue Price, plus any Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series B Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this clause (ii) is hereinafter referred to as the "**Series B Liquidation Amount**") and (iii) in the case of the Series C Preferred Stock, the greater of (A) the Series C Original Issue Price, plus any Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series C Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this clause (iii) is hereinafter referred to as the "**Series C Liquidation Amount**"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1, the holders of shares of Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Payments to Holders of Common Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, after the payment in full of all Series A Liquidation Amounts required to be paid to the holders of shares of Series A Preferred Stock, all Series B Liquidation Amounts required to be paid to the holders of shares of Series B Preferred Stock and all Series C Liquidation Amounts required to be paid to the holders of shares of Series C Preferred Stock, in the case of a voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the remaining assets of the Corporation available for distribution to its stockholders or, in the case of a Deemed Liquidation Event, the consideration not payable to the holders of shares of Preferred Stock pursuant to Section 2.1 or the remaining Available Proceeds, as the case may be, in each case, shall be distributed among the holders of shares of Common Stock, pro rata based on the number of shares held by each such holder.

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a "**Deemed Liquidation Event**" unless (i) the holders of a majority in voting power of the outstanding shares of Preferred Stock, consenting or voting (as the case may be) together as a single class (the "**Requisite Holders**") and (ii) the holders (other than the Founding Investor and its Affiliates, each as defined in the Series C Preferred Stock Purchase Agreement, dated on or about the Series C Original Issue Date, by and among the Corporation and the other parties named therein) of at least 1,265,822 shares of Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Preferred Stock), consenting or voting (as the case may be) (clauses (i) and (ii) collectively the "**Requisite Majority**"), elect otherwise by written notice sent to the Corporation at least ten (10) days prior to the effective date of any such event:

(a) a merger or consolidation in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation, except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation (provided that, for the purpose of this Subsection 2.3.1, all shares of Common Stock issuable upon exercise of Options (as defined below) outstanding immediately prior to such merger or consolidation or upon conversion of Convertible Securities (as defined below) outstanding immediately prior to such merger or consolidation shall be deemed to be outstanding immediately prior to such merger or consolidation and, if applicable, converted or exchanged in such merger or consolidation on the same terms as the actual outstanding shares of Common Stock are converted or exchanged); or

(b) (1) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or (2) the sale or disposition (whether by merger, consolidation or otherwise, and whether in a single transaction or a series of related transactions) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the "**Merger Agreement**") provides that the consideration payable to the stockholders of the Corporation in such Deemed Liquidation Event shall be paid to the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(ii) or 2.3.1(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within ninety (90) days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Preferred Stock no later than the ninetieth (90^{th}) day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause (ii) to require the redemption of such shares of Preferred Stock, and (ii) if the holders of a majority in voting power of the then outstanding shares of Preferred Stock so request in a written instrument delivered to the Corporation not later than one hundred twenty (120) days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors of the Corporation (the "**Board of Directors**"), including the Preferred Director (as defined below)), together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the "**Available Proceeds**"), on the one hundred fiftieth (150^{th}) day after such Deemed Liquidation Event, to redeem all outstanding shares of Series A Preferred Stock at a price per share equal to the Series A Liquidation Amount, all outstanding shares of Series B Preferred Stock at a price per share equal to the Series B Liquidation Amount and all outstanding shares of Series C Preferred Stock at a price per share equal to the Series C Liquidation Amount. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Preferred Stock, the Corporation shall redeem a pro rata portion of each holder's shares of Preferred Stock to the fullest extent of such Available Proceeds, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem all such shares, and shall redeem the remaining shares as soon as it may lawfully do so under Delaware law governing distributions to stockholders. The Corporation shall send written notice of the mandatory redemption (the "**Redemption Notice**") to each holder of record of Preferred Stock not less than forty (40) days prior to the date of any such redemption (the "**Redemption Date**"). The Redemption Notice shall state: (1) the number of shares of each series of Preferred Stock held by the holder that the Corporation shall redeem on the Redemption Date specified in the Redemption Notice; (2) the Redemption Date, the Series A Liquidation Amount, the Series B Liquidation Amount and the Series C Liquidation Amount; (3) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Subsection 4.1); and (4) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Preferred Stock to be redeemed. On or before the Redemption Date, each holder of shares of Preferred Stock to be redeemed on the Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall, if a holder of shares in certificated form, surrender the certificate or certificates representing such shares (or, if such registered holder

alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Series A Liquidation Amount, the Series B Liquidation Amount and the Series C Liquidation Amount for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof. In the event less than all of the shares of Preferred Stock represented by a certificate are redeemed, a new certificate, instrument or book entry representing the unredeemed shares of Preferred Stock shall promptly be issued to such holder. If the Redemption Notice shall have been duly given, and if on the Redemption Date the Series A Liquidation Amount, the Series B Liquidation Amount and the Series C Liquidation Amount payable upon redemption of the Preferred Stock to be redeemed on the Redemption Date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that any certificates evidencing any of the shares of Preferred Stock so called for redemption shall not have been surrendered, all rights with respect to such shares of Preferred Stock shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Series A Liquidation Amount, the Series B Liquidation Amount and the Series C Liquidation Amount, as the case may be, without interest upon surrender of any such certificate or certificates therefor. Prior to the distribution or redemption provided for in this Subsection 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities to be paid or distributed to such holders pursuant to such Deemed Liquidation Event in accordance with this Section 2, including without limitation, Subsection 2.3.1. The value of such property, rights or securities shall be determined in good faith by the Board of Directors, including the approval of the Preferred Director.

2.3.4 Allocation of Escrow and Contingent Consideration. In the event of a Deemed Liquidation Event pursuant to Subsection 2.3.1(a)(i), if any portion of the consideration payable to the stockholders of the Corporation is payable only upon satisfaction of contingencies (the "**Additional Consideration**"), the Merger Agreement shall provide that (a) the portion of such consideration that is not Additional Consideration (such portion, the "**Initial Consideration**") shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event; and (b) any Additional Consideration which becomes payable to the stockholders of the Corporation upon satisfaction of such contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this Subsection 2.3.4, consideration placed into escrow or retained as a holdback to be available for satisfaction of indemnification or similar obligations in connection with such Deemed Liquidation Event shall be deemed to be Additional Consideration.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Amended and Restated Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class and on an as-converted to Common Stock basis.

3.2 Election of Directors. The holders of record of the shares of Series A Preferred Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation (the "**Preferred Director**"). Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of shares of Series A Preferred Stock, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of Series A Preferred Stock fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Series A Preferred Stock elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. The holders of record of the shares of Common Stock and of any other class or series of voting stock (including the Preferred Stock), voting together as a single class, shall be entitled to elect the balance of the total number of directors of the Corporation. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Subsection 3.2, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Subsection 3.2.

3.3 Preferred Stock Protective Provisions. At any time when shares of Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation, conversion or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the Requisite Holders given in writing or by vote at a meeting, consenting or voting (as the case may be) together as a single class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.3.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing;

3.3.2 amend, alter or repeal any provision of this Amended and Restated Certificate of Incorporation or Bylaws of the Corporation;

3.3.3 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase the authorized number of shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock of the Corporation unless the same ranks junior to the Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.3.4 (i) reclassify, alter or amend any existing security of the Corporation that is *pari passu* with the Series A Preferred Stock, the Series B Preferred Stock and/or the Series C Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to the Series A Preferred Stock, the Series B Preferred Stock and/or the Series C Preferred Stock in respect of any such right, preference or privilege, or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series A Preferred Stock, the Series B Preferred Stock and/or the Series C Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or *pari passu* with the Series A Preferred Stock, the Series B Preferred Stock and/or the Series C Preferred Stock in respect of any such right, preference or privilege;

3.3.5 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at a price no greater than the original purchase price thereof;

3.3.6 create, or authorize the creation of, or issue, or authorize the issuance of any debt security or create any lien or security interest (except for purchase money liens or statutory liens of landlords, mechanics, materialmen, workmen, warehousemen and other similar persons arising or incurred in the ordinary course of business) or incur other indebtedness for borrowed money, including but not limited to obligations and contingent obligations under guarantees, or permit any subsidiary to take any such action with respect to any debt security, lien, security interest or other indebtedness for borrowed money unless such debt security, lien, security interest or other indebtedness for borrowed money has received the prior approval of the Board of Directors, including the approval of the Preferred Director;

3.3.7 create, or hold capital stock in, any subsidiary (including without limitation, a wholly-owned subsidiary) other than capital stock held on the date of this Amended and Restated Certificate of Incorporation, or permit any direct or indirect subsidiary to create, or hold capital stock in, any subsidiary (including without limitation, a wholly-owned subsidiary), or create, or authorize the creation of, or issue or obligate itself to issue, any shares of any class or series of capital stock, or sell, transfer or otherwise dispose of any capital stock of any direct or indirect subsidiary of the Corporation, or permit any direct or indirect subsidiary to sell, lease, transfer, exclusively license or otherwise dispose (in a single transaction or series of related transactions) of all or substantially all of the assets of such subsidiary;

3.3.8 increase or decrease the authorized number of directors constituting the Board of Directors; or

3.3.9 adopt any equity incentive plan, or increase the shares of Common Stock reserved for issuance under the Corporation's 2019 Equity Incentive Plan or any other equity incentive plan.

3.4 Series B Preferred Stock Protective Provisions. At any time when shares of Series B Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation, conversion or otherwise, without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation or Bylaws of the Corporation) the written consent or affirmative vote of the holders of a majority of the then outstanding shares of Series B Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) as a separate class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect, amend, alter or repeal any provision of this Amended and Restated Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the holders of the Series B Preferred Stock; provided, however, for the avoidance of doubt, that any amendment of this Amended and Restated Certificate of Incorporation to authorize a new series of capital stock that is senior to or on parity with the Series B Preferred Stock with respect to dividends, liquidation, redemption and/or voting shall not be deemed to adversely affect the Series B Preferred Stock.

3.5 Series C Preferred Stock Protective Provisions. At any time when shares of Series C Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation, conversion or otherwise, without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation or Bylaws of the Corporation) the written consent or affirmative vote of the holders of a majority of the then outstanding shares of Series C Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) as a separate class, and any such act or transaction entered into without such consent or vote shall be null and void ab initio, and of no force or effect, amend, alter or repeal any provision of this Amended and Restated Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the holders of the Series C Preferred Stock; provided, however, for the avoidance of doubt, that any amendment of this Amended and Restated Certificate of Incorporation to authorize a new series of capital stock that is senior to or on parity with the Series C Preferred Stock with respect to dividends, liquidation, redemption and/or voting shall not be deemed to adversely affect the Series C Preferred Stock.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1 Right to Convert.

4.1.1 Conversion Ratios. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the Applicable Original Issue Price by the Applicable Conversion Price (as defined below) in effect at the time of conversion. The "**Series A Conversion Price**" shall initially be equal to $1.00. Such initial Series A Conversion Price, and the rate at which shares of Series A Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below. The "**Series B Conversion Price**" shall initially be equal to $11.85. Such initial Series B Conversion Price, and the rate at which shares of Series B Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below. The "**Series C Conversion Price**" shall initially be equal to $11.85. Such initial Series C Conversion Price, and the rate at which shares of Series C Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below. The Series A Conversion Price, in the case of the Series A Preferred Stock, the Series B Conversion Price, in the case of the Series B Preferred Stock, and the Series C Conversion Price, in the case of the Series C Preferred Stock, are individually or collectively, as applicable, referred to herein as the "**Applicable Conversion Price**."

4.1.2 Termination of Conversion Rights. In the event of a notice of redemption of any shares of Preferred Stock pursuant to Subsection 2.3.2(b), the Conversion Rights of the shares designated for redemption shall terminate at the close of business on the last full day preceding the date fixed for redemption, unless the redemption price is not fully paid on such redemption date, in which case the Conversion Rights for such shares shall continue until such price is paid in full. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors, including the Preferred Director.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall (a) provide written notice to the Corporation's transfer agent at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent) that such holder elects to convert all or any number of such holder's shares of Preferred Stock and, if applicable, any event on which such conversion is contingent and (b) if such holder's shares are certificated, surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent). Such notice shall state such holder's name or the names of the nominees in which such holder wishes the shares of Common Stock to be issued. If required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice and, if applicable, certificates (or lost certificate affidavit and agreement) shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock issuable upon conversion of the specified shares shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, (x) in the event such shares are certificated, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, and (y) in the event such shares are uncertificated, a notice of issuance of uncertificated shares and may, upon written request, issue and deliver a certificate for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and may, if applicable and upon written request, issue and deliver a certificate for the number (if any) of shares of Preferred Stock represented by any surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Amended

and Restated Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the Applicable Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of such series of Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock at such adjusted Applicable Conversion Price.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of such series of Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Applicable Conversion Price shall be made for any declared but unpaid dividends on the Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Applicable Conversion Prices for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "**Option**" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "**Series C Original Issue Date**" shall mean the date on which the first share of Series C Preferred Stock was issued.

(c) "**Convertible Securities**" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "**Additional Shares of Common Stock**" shall mean all shares of Common Stock issued (or, pursuant to Subsection 4.4.3 below, deemed to be issued) by the Corporation after the Series C Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "**Exempted Securities**"):

(i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on Preferred Stock;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Subsection 4.5, 4.6, 4.7 or 4.8;

(iii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors, including the approval of the Preferred Director;

(iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;

(v) shares of Common Stock issued in the Corporation's first underwritten public offering of Common Stock under the Securities Act of 1933, as amended (the "**Securities Act**");

(vi) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors, including the approval of the Preferred Director; or

(vii) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, marketing or other similar agreements or strategic partnerships approved by the Board of Directors, including the approval of the Preferred Director.

4.4.2 No Adjustment of Applicable Conversion Price. No adjustment in the Series A Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of a majority in voting power of the outstanding shares of Series A Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment in the Series B Conversion Price shall

be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of a majority of the outstanding shares of Series B Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment in the Series C Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of a majority of the outstanding shares of Series C Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series C Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Applicable Conversion Price pursuant to the terms of Subsection 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Applicable Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Applicable Conversion Price as would have been obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the Applicable Conversion Price to an amount which exceeds the lower of (i) the Applicable Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Applicable Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Applicable Conversion Price pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the Applicable Conversion Price then in effect, or because such Option or Convertible Security was issued before the Series C Original Issue Date), are revised after the Series C Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Applicable Conversion Price pursuant to the terms of Subsection 4.4.4, the Applicable Conversion Price shall be readjusted to such Applicable Conversion Price as would have been obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Applicable Conversion Price provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Applicable Conversion Price that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the Applicable Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Applicable Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series C Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than the Applicable Conversion Price in effect immediately prior to such issuance or deemed issuance, then the Applicable Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the Applicable Conversion Price in effect immediately after such issuance or deemed issuance of Additional Shares of Common Stock;

(b) "CP_1" shall mean the Applicable Conversion Price in effect immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of Common Stock outstanding immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issuance or deemed issuance or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issuance or deemed issuance);

(d) "B" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued or deemed issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issuance or deemed issuance by CP_1); and

(e) "C" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issuance or deemed issuance of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property. Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issuance or deemed issuance, as determined in good faith by the Board of Directors, including the Preferred Director; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors, including the Preferred Director.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Applicable Conversion Price pursuant to the terms of Subsection 4.4.4, and such issuance dates occur within a period of no more than ninety (90) days from the first such issuance to the final such issuance, then, upon the final such issuance, the Applicable Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series C Original Issue Date effect a subdivision of the outstanding Common Stock, the Applicable Conversion Price in effect immediately before such subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any

time or from time to time after the Series C Original Issue Date combine the outstanding shares of Common Stock, the Applicable Conversion Price in effect immediately before such combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series C Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the Applicable Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the Applicable Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing, (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Applicable Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Applicable Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) no such adjustment shall be made with respect to the Applicable Conversion Price if the holders of the Series A Preferred Stock, the Series B Preferred Stock and/or Series C Preferred Stock, as the case may be, simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Series A Preferred Stock, Series B Preferred Stock and/or Series C Preferred Stock, as the case may be, had been converted into shares of Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series C Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Subsection 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation, conversion or merger involving the Corporation in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.5, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation, conversion or merger, each share of Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Series A Preferred Stock, one share of Series B Preferred Stock or one share of Series C Preferred Stock, as the case may be, immediately prior to such reorganization, recapitalization, reclassification, consolidation, conversion or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors, including the Preferred Director) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Applicable Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Applicable Conversion Price pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable, but in any event not later than ten (10) days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Series A Preferred Stock, Series B Preferred Stock and/or Series C Preferred Stock, as the case may be, a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Series A Preferred Stock, the Series B Preferred Stock and/or the Series C Preferred Stock, as the case may be, is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Series A Preferred Stock, Series B Preferred Stock and/or Series C Preferred Stock, as the case may be, furnish or cause to be furnished to such holder a certificate setting forth (i) the Applicable Conversion Price then in effect and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of the Series A Preferred Stock, the Series B Preferred Stock and/or the Series C Preferred stock, as the case may be.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation, then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least ten (10) days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act resulting in at least $50,000,000 of gross proceeds to the Corporation or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the Requisite Majority (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "**Mandatory Conversion Time**"), then (i) all outstanding shares of Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate as calculated pursuant to Subsection 4.1.1 and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Subsection 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender any certificates at or prior to such time), except only the rights of the holders thereof, upon surrender

of any certificate or certificates of such holders (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall (a) (i) in the event that such shares are certificated, issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, or (ii) in the event that such shares are uncertificated, issue and deliver to such holder, or to his, her or its nominee, a notice of issuance of uncertificated shares and may, upon written request, issue and deliver a certificate for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof, and (b) pay cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of each applicable series of Preferred Stock accordingly.

6. Redeemed or Otherwise Acquired Shares. Any shares of Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

7. Waiver. Any of the rights, powers, preferences and other terms of the Series A Preferred Stock set forth herein may be waived, either prospectively or retrospectively, on behalf of all holders of Series A Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series A Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series B Preferred Stock set forth herein may be waived, either prospectively or retrospectively, on behalf of all holders of Series B Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series B Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series C Preferred Stock set forth herein may be waived, either prospectively or retrospectively, on behalf of all holders of Series C Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series C Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Preferred Stock as set forth in Sections 2.3.1 and 5.1(b) requiring the consent of the Requisite Majority, may be waived, either prospectively or retrospectively, on behalf of all holders of Preferred Stock by the Requisite Majority. Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein, except as otherwise provided in this Section 7, may be waived, either prospectively or retrospectively, on behalf of all holders of Preferred Stock by the affirmative written consent or vote of the Requisite Holders.

8. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by this Amended and Restated Certificate of Incorporation or the Bylaws of the Corporation, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by this Amended and Restated Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation. Each director shall be entitled to one vote on each matter presented to the Board of Directors; provided, however, that, so long as the holders of Series A Preferred Stock are entitled to elect the Preferred Director, the affirmative vote of the Preferred Director shall be required for the authorization by the Board of Directors of any of the matters set forth in Section 5.2 of the Amended and Restated Investors' Rights Agreement, dated on or about the date hereof, by and among the Corporation and the other parties thereto, as such agreement may be amended and/or restated from time to time.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "**Excluded Opportunity**" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession

of, (a) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (b) any holder of Preferred Stock or any partner, member, director, stockholder, employee, affiliate or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, the persons referred to in clauses (a) and (b) are "**Covered Persons**"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation while such Covered Person is performing services in such capacity. Any repeal or modification of this Article Tenth will only be prospective and will not affect the rights under this Article Tenth in effect at the time of the occurrence of any actions or omissions to act giving rise to liability. Notwithstanding anything to the contrary contained elsewhere in this Amended and Restated Certificate of Incorporation, the affirmative vote of the Requisite Holders will be required to amend or repeal, or to adopt any provisions inconsistent with this Article Tenth.

ELEVENTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's certificate of incorporation or bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Eleventh shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Eleventh (including, without limitation, each portion of any sentence of this Article Eleventh containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

TWELFTH: The following indemnification provisions shall apply to the persons enumerated below.

1. Right to Indemnification of Directors and Officers. The Corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (an "**Indemnified Person**") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "**Proceeding**"), by reason of the fact that such person, or a person for whom such person is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request

of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such Indemnified Person in such Proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section 3 of this Article Twelfth, the Corporation shall be required to indemnify an Indemnified Person in connection with a Proceeding (or part thereof) commenced by such Indemnified Person only if the commencement of such Proceeding (or part thereof) by the Indemnified Person was authorized in advance by the Board of Directors.

2. Prepayment of Expenses of Directors and Officers. The Corporation shall pay the expenses (including attorneys' fees) incurred by an Indemnified Person in defending any Proceeding in advance of its final disposition, provided, however, that, to the extent required by law, such payment of expenses in advance of the final disposition of the Proceeding shall be made only upon receipt of an undertaking by the Indemnified Person to repay all amounts advanced if it should be ultimately determined that the Indemnified Person is not entitled to be indemnified under this Article Twelfth or otherwise.

3. Claims by Directors and Officers. If a claim for indemnification or advancement of expenses under this Article Twelfth is not paid in full within thirty (30) days after a written claim therefor by the Indemnified Person has been received by the Corporation, the Indemnified Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Corporation shall have the burden of proving that the Indemnified Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

4. Indemnification of Employees and Agents. The Corporation may indemnify and advance expenses to any person who was or is made or is threatened to be made or is otherwise involved in any Proceeding by reason of the fact that such person, or a person for whom such person is the legal representative, is or was an employee or agent of the Corporation or, while an employee or agent of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such person in connection with such Proceeding. The ultimate determination of entitlement to indemnification of persons who are non-director or officer employees or agents shall be made in such manner as is determined by the Board of Directors in its sole discretion. Notwithstanding the foregoing sentence, the Corporation shall not be required to indemnify a person in connection with a Proceeding initiated by such person if the Proceeding was not authorized in advance by the Board of Directors.

5. Advancement of Expenses of Employees and Agents. The Corporation may pay the expenses (including attorneys' fees) incurred by an employee or agent in defending any Proceeding in advance of its final disposition on such terms and conditions as may be determined by the Board of Directors.

6. Non-Exclusivity of Rights. The rights conferred on any person by this Article Twelfth shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of this Amended and Restated Certificate of Incorporation, the Bylaws of the Corporation, or any agreement, or pursuant to any vote of stockholders or disinterested directors or otherwise.

7. Other Indemnification. The Corporation's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer or employee of another Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise shall be reduced by any amount such person may collect as indemnification from such other Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise.

8. Insurance. The Board of Directors may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Corporation's expense insurance: (a) to indemnify the Corporation for any obligation which it incurs as a result of the indemnification of directors, officers and employees under the provisions of this Article Twelfth; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Corporation under the provisions of this Article Twelfth.

9. Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article Twelfth shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification. The rights provided hereunder shall inure to the benefit of any Indemnified Person and such person's heirs, executors and administrators.

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this corporation's Amended and Restated Certificate of Incorporation, as amended, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 9th day of May, 2023.

By: /s/ Michael T. Nally
Name: Michael T. Nally
Title: President and Chief Executive Officer

Exhibit 3.1A

CERTIFICATE OF AMENDMENT

TO

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

GENERATE BIOMEDICINES, INC.

Pursuant to Section 242 of the
General Corporation Law of the State of Delaware

Generate Biomedicines, Inc. (the "**Corporation**"), a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

1. The Board of Directors of the Corporation duly adopted resolutions by written consent in accordance with Sections 141(f) and 242 of the General Corporation Law of the State of Delaware recommending and declaring advisable that the Amended and Restated Certificate of Incorporation of the Corporation, as amended (the "**Restated Certificate**") be amended and that such amendments be submitted to the stockholders of the Corporation for their consideration, as follows:

RESOLVED, that the first sentence of Article FOURTH of the Restated Certificate be amended and restated in its entirety to read as follows:

"The total number of shares of all classes of stock which the Corporation shall have authority to issue is 271,158,196 consisting of (i) 174,079,098 shares of Common Stock, $0.001 par value per share ("**Common Stock**"), and (ii) 97,079,098 shares of Preferred Stock, $0.001 par value per share ("**Preferred Stock**")."

2. The stockholders of the Corporation duly approved said proposed amendments by written consent in accordance with Sections 228 and 242 of the General Corporation Law of the State of Delaware.

3. The aforesaid amendments have been duly adopted in accordance with Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, this Certificate of Amendment to Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 4th day of December, 2023.

GENERATE BIOMEDICINES, INC.

By: /s/ Michael T. Nally
Name: Michael T. Nally
Title: President and Chief Executive Officer

Exhibit 3.1B

CERTIFICATE OF AMENDMENT

TO

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

GENERATE BIOMEDICINES, INC.

Pursuant to Section 242 of the
General Corporation Law of the State of Delaware

Generate Biomedicines, Inc. (the "**Corporation**"), a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

1. The Board of Directors of the Corporation duly adopted resolutions by written consent in accordance with Sections 141(f) and 242 of the General Corporation Law of the State of Delaware recommending and declaring advisable that the Amended and Restated Certificate of Incorporation of the Corporation, as amended (the "**Restated Certificate**") be amended and that such amendments be submitted to the stockholders of the Corporation for their consideration, as follows:

RESOLVED, that the first sentence of Article FOURTH of the Restated Certificate be amended and restated in its entirety to read as follows:

"The total number of shares of all classes of stock which the Corporation shall have authority to issue is 276,158,196 consisting of (i) 179,079,098 shares of Common Stock, $0.001 par value per share ("**Common Stock**"), and (ii) 97,079,098 shares of Preferred Stock, $0.001 par value per share ("**Preferred Stock**")."

2. The stockholders of the Corporation duly approved said proposed amendments by written consent in accordance with Sections 228 and 242 of the General Corporation Law of the State of Delaware.

3. The aforesaid amendments have been duly adopted in accordance with Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, this Certificate of Amendment to Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 9th day of February, 2024.

GENERATE BIOMEDICINES, INC.

By: /s/ Michael T. Nally
Name: Michael T. Nally
Title: President and Chief Executive Officer

Exhibit 3.1C

CERTIFICATE OF AMENDMENT

TO

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

GENERATE BIOMEDICINES, INC.

Pursuant to Section 242 of the
General Corporation Law of the State of Delaware

Generate Biomedicines, Inc. (the "**Corporation**"), a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

1. The Board of Directors of the Corporation duly adopted resolutions by written consent in accordance with Sections 141(f) and 242 of the General Corporation Law of the State of Delaware recommending and declaring advisable that the Amended and Restated Certificate of Incorporation of the Corporation, as amended (the "**Restated Certificate**") be amended and that such amendments be submitted to the stockholders of the Corporation for their consideration, as follows:

RESOLVED, that the first sentence of Article FOURTH of the Restated Certificate be amended and restated in its entirety to read as follows:

"The total number of shares of all classes of stock which the Corporation shall have authority to issue is 309,913,470 consisting of (i) 195,956,735 shares of Common Stock, $0.001 par value per share ("**Common Stock**"), and (ii) 113,956,735 shares of Preferred Stock, $0.001 par value per share ("**Preferred Stock**")."

RESOLVED, that the first sentence of Part B of Article FOURTH of the Restated Certificate be amended and restated in its entirety to read as follows:

"40,250,000 shares of the authorized Preferred Stock of the Corporation are hereby designated "Series A Preferred Stock" with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations, 31,512,642 shares of the authorized Preferred Stock of the Corporation are hereby designated "Series B Preferred Stock" with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations and 42,194,093 shares of the authorized Preferred Stock of the Corporation are hereby designated "Series C Preferred Stock" with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to "Sections" or "Subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth."

2. The stockholders of the Corporation duly approved said proposed amendments by written consent in accordance with Sections 228 and 242 of the General Corporation Law of the State of Delaware.

3. The aforesaid amendments have been duly adopted in accordance with Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, this Certificate of Amendment to Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 9th day of October, 2024.

GENERATE BIOMEDICINES, INC.

By: /s/ Michael T. Nally
Name: Michael T. Nally
Title: President and Chief Executive Officer

Exhibit 3.1D

CERTIFICATE OF AMENDMENT

TO

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

GENERATE BIOMEDICINES, INC.

Pursuant to Section 242 of the
General Corporation Law of the State of Delaware

Generate Biomedicines, Inc. (the "**Corporation**"), a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

1. The Board of Directors of the Corporation duly adopted resolutions by written consent in accordance with Sections 141(f) and 242 of the General Corporation Law of the State of Delaware recommending and declaring advisable that the Amended and Restated Certificate of Incorporation of the Corporation, as amended (the "**Restated Certificate**") be amended and that such amendments be submitted to the stockholders of the Corporation for their consideration, as follows:

RESOLVED, that the first sentence of Article FOURTH of the Restated Certificate be amended and restated in its entirety to read as follows:

"The total number of shares of all classes of stock which the Corporation shall have authority to issue is 314,413,470 consisting of (i) 200,456,735 shares of Common Stock, $0.001 par value per share ("**Common Stock**"), and (ii) 113,956,735 shares of Preferred Stock, $0.001 par value per share ("**Preferred Stock**")."

2. The stockholders of the Corporation duly approved said proposed amendments by written consent in accordance with Sections 228 and 242 of the General Corporation Law of the State of Delaware.

3. The aforesaid amendments have been duly adopted in accordance with Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, this Certificate of Amendment to Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 21st day of February, 2025.

GENERATE BIOMEDICINES, INC.

By: /s/ Michael T. Nally
Name: Michael T. Nally
Title: President and Chief Executive Officer

Exhibit 3.3

BYLAWS

OF

GENERATE BIOMEDICINES, INC.

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ARTICLE I

STOCKHOLDERS

1.1 Place of Meetings. All meetings of stockholders shall be held at such place as may be designated from time to time by the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President or, if not so designated, at the principal office of the corporation. The Board of Directors may, in its sole discretion, determine that a meeting shall not be held at any place, but may instead be held solely by means of remote communication in a manner consistent with the General Corporation Law of the State of Delaware.

1.2 Annual Meeting. The annual meeting of stockholders for the election of directors and for the transaction of such other business as may properly be brought before the meeting shall be held on a date and at a time designated by the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President (which date shall not be a legal holiday in the place where the meeting is to be held).

1.3 Special Meetings. Special meetings of stockholders for any purpose or purposes may be called at any time by only the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President, and may not be called by any other person or persons. The Board of Directors may postpone or reschedule any previously scheduled special meeting of stockholders. Business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting.

1.4 Notice of Meetings. Except as otherwise provided by law, notice of each meeting of stockholders, whether annual or special, shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting. Without limiting the manner by which notice otherwise may be given to stockholders, any notice shall be effective if given by a form of electronic transmission consented to (in a manner consistent with the General Corporation Law of the State of Delaware) by the stockholder to whom the notice is given. The notices of all meetings shall state the place, if any, date and time of the meeting and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting. The notice of a special meeting shall state, in addition, the purpose or purposes for which the meeting is called. If notice is given by mail, such notice shall be deemed given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation. If notice is given by electronic transmission, such notice shall be deemed given at the time specified in Section 232 of the General Corporation Law of the State of Delaware.

1.5 Voting List. The Secretary shall prepare, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least 10 days prior to the meeting: (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the corporation. If the meeting is to

be held at a physical location (and not solely by means of remote communication), then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. The list shall presumptively determine the identity of the stockholders entitled to vote at the meeting and the number of shares held by each of them.

1.6 Quorum. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, the holders of a majority in voting power of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at the meeting, present in person, present by means of remote communication in a manner, if any, authorized by the Board of Directors in its sole discretion, or represented by proxy, shall constitute a quorum for the transaction of business; provided, however, that where a separate vote by a class or classes or series of capital stock is required by law or the Certificate of Incorporation, the holders of a majority in voting power of the shares of such class or classes or series of the capital stock of the corporation issued and outstanding and entitled to vote on such matter, present in person, present by means of remote communication in a manner, if any, authorized by the Board of Directors in its sole discretion, or represented by proxy, shall constitute a quorum entitled to take action with respect to the vote on such matter. A quorum, once established at a meeting, shall not be broken by the withdrawal of enough votes to leave less than a quorum.

1.7 Adjournments. Any meeting of stockholders may be adjourned from time to time to any other time and to any other place at which a meeting of stockholders may be held under these Bylaws by the chairman of the meeting or by the stockholders present or represented at the meeting and entitled to vote, although less than a quorum. It shall not be necessary to notify any stockholder of any adjournment of less than 30 days if the time and place, if any, of the adjourned meeting, and the means of remote communication, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting, are announced at the meeting at which adjournment is taken, unless after the adjournment a new record date is fixed for the adjourned meeting. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting.

1.8 Voting and Proxies. Each stockholder shall have one vote for each share of stock entitled to vote held of record by such stockholder and a proportionate vote for each fractional share so held, unless otherwise provided by law or the Certificate of Incorporation. Each stockholder of record entitled to vote at a meeting of stockholders, or to express consent or dissent to corporate action without a meeting, may vote or express such consent or dissent in person (including by means of remote communications, if any, by which stockholders may be deemed to be present in person and vote at such meeting) or may authorize another person or persons to vote or act for such stockholder by a proxy executed or transmitted in a manner permitted by the General Corporation Law of the State of Delaware by the stockholder or such stockholder's authorized agent and delivered (including by electronic transmission) to the Secretary of the corporation. No such proxy shall be voted or acted upon after three years from the date of its execution, unless the proxy expressly provides for a longer period.

1.9 Action at Meeting. When a quorum is present at any meeting, any matter other than the election of directors to be voted upon by the stockholders at such meeting shall be decided by the vote of the holders of shares of stock having a majority in voting power of the votes cast by the holders of all of the shares of stock present or represented at the meeting and voting affirmatively or negatively on such matter (or if there are two or more classes or series of stock entitled to vote as separate classes, then in the case of each such class or series, the holders of a majority in voting power of the shares of stock of that class or series present or represented at the meeting and voting affirmatively or negatively on such matter), except when a different vote is required by law, the Certificate of Incorporation or these Bylaws. When a quorum is present at any meeting, any election by stockholders of directors shall be determined by a plurality of the votes cast by the stockholders entitled to vote on the election.

1.10 Conduct of Meetings.

(a) Chairman of Meeting. Meetings of stockholders shall be presided over by the Chairman of the Board, if any, or in the Chairman's absence by the Vice Chairman of the Board, if any, or in the Vice Chairman's absence by the Chief Executive Officer, or in the Chief Executive Officer's absence, by the President, or in the President's absence by a Vice President, or in the absence of all of the foregoing persons by a chairman designated by the Board of Directors, or in the absence of such designation by a chairman chosen by vote of the stockholders at the meeting. The Secretary shall act as secretary of the meeting, but in the Secretary's absence the chairman of the meeting may appoint any person to act as secretary of the meeting.

(b) Rules, Regulations and Procedures. The Board of Directors may adopt by resolution such rules, regulations and procedures for the conduct of any meeting of stockholders of the corporation as it shall deem appropriate including, without limitation, such guidelines and procedures as it may deem appropriate regarding the participation by means of remote communication of stockholders and proxyholders not physically present at a meeting. Except to the extent inconsistent with such rules, regulations and procedures as adopted by the Board of Directors, the chairman of any meeting of stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order at the meeting and the safety of those present; (iii) limitations on attendance at or participation in the meeting to stockholders of record of the corporation, their duly authorized and constituted proxies or such other persons as shall be determined; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

1.11 Action without Meeting.

(a) Taking of Action by Consent. Any action required or permitted to be taken at any annual or special meeting of stockholders of the corporation may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, is signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on such action were present and voted. Except as otherwise provided by the Certificate of Incorporation, stockholders may act by written consent to elect directors; provided, however, that, if such consent is less than unanimous, such action by written consent may be in lieu of holding an annual meeting only if all of the directorships to which directors could be elected at an annual meeting held at the effective time of such action are vacant and are filled by such action.

(b) Electronic Transmission of Consents. A telegram, cablegram or other electronic transmission consenting to an action to be taken and transmitted by a stockholder or proxyholder, or by a person or persons authorized to act for a stockholder or proxyholder, shall be deemed to be written, signed and dated for the purposes of this section, provided that any such telegram, cablegram or other electronic transmission sets forth or is delivered with information from which the corporation can determine (i) that the telegram, cablegram or other electronic transmission was transmitted by the stockholder or proxyholder or by a person or persons authorized to act for the stockholder or proxyholder and (ii) the date on which such stockholder or proxyholder or authorized person or persons transmitted such telegram, cablegram or electronic transmission. The date on which such telegram, cablegram or electronic transmission is transmitted shall be deemed to be the date on which such consent was signed. No consent given by telegram, cablegram or other electronic transmission shall be deemed to have been delivered until such consent is reproduced in paper form and until such paper form shall be delivered to the corporation by delivery to its registered office in the State of Delaware, its principal place of business or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a corporation's registered office shall be made by hand or by certified or registered mail, return receipt requested. Notwithstanding the foregoing limitations on delivery, consents given by telegram, cablegram or other electronic transmission may be otherwise delivered to the principal place of business of the corporation or to an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded if, to the extent and in the manner provided by resolution of the Board of Directors. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing.

(c) Notice of Taking of Corporate Action. Prompt notice of the taking of corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the corporation.

ARTICLE II

DIRECTORS

2.1 General Powers. The business and affairs of the corporation shall be managed by or under the direction of a Board of Directors, who may exercise all of the powers of the corporation except as otherwise provided by law or the Certificate of Incorporation.

2.2 Number, Election and Qualification. Subject to the rights of holders of any series of Preferred Stock to elect directors, the number of directors of the corporation shall be established from time to time by the stockholders or the Board of Directors. The directors shall be elected at the annual meeting of stockholders by such stockholders as have the right to vote on such election. Election of directors need not be by written ballot. Directors need not be stockholders of the corporation.

2.3 Chairman of the Board; Vice Chairman of the Board. The Board of Directors may appoint from its members a Chairman of the Board and a Vice Chairman of the Board, neither of whom need be an employee or officer of the corporation. If the Board of Directors appoints a Chairman of the Board, such Chairman shall perform such duties and possess such powers as are assigned by the Board of Directors and, if the Chairman of the Board is also designated as the corporation's Chief Executive Officer, shall have the powers and duties of the Chief Executive Officer prescribed in Section 3.7 of these Bylaws. If the Board of Directors appoints a Vice Chairman of the Board, such Vice Chairman shall perform such duties and possess such powers as are assigned by the Board of Directors. Unless otherwise provided by the Board of Directors, the Chairman of the Board or, in the Chairman's absence, the Vice Chairman of the Board, if any, shall preside at all meetings of the Board of Directors.

2.4 Tenure. Each director shall hold office until the next annual meeting of stockholders and until a successor is elected and qualified, or until such director's earlier death, resignation or removal.

2.5 Quorum. The greater of (a) a majority of the directors at any time in office and (b) one-third of the number of directors fixed pursuant to Section 2.2 of these Bylaws shall constitute a quorum of the Board of Directors. If at any meeting of the Board of Directors there shall be less than such a quorum, a majority of the directors present may adjourn the meeting from time to time without further notice other than announcement at the meeting, until a quorum shall be present.

2.6 Action at Meeting. Every act or decision done or made by a majority of the directors present at a meeting of the Board of Directors duly held at which a quorum is present shall be regarded as the act of the Board of Directors, unless a greater number is required by law or by the Certificate of Incorporation.

2.7 Removal. Except as otherwise provided by the General Corporation Law of the State of Delaware, any one or more or all of the directors of the corporation may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors, except that the directors elected by the holders of a particular class or series

of stock may be removed without cause only by vote of the holders of a majority of the outstanding shares of such class or series.

2.8 Vacancies. Subject to the rights of holders of any series of Preferred Stock to elect directors, unless and until filled by the stockholders, any vacancy or newly-created directorship on the Board of Directors, however occurring, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. A director elected to fill a vacancy shall be elected for the unexpired term of such director's predecessor in office, and a director chosen to fill a position resulting from a newly-created directorship shall hold office until the next annual meeting of stockholders and until a successor is elected and qualified, or until such director's earlier death, resignation or removal.

2.9 Resignation. Any director may resign by delivering a resignation in writing or by electronic transmission to the corporation at its principal office or to the Chairman of the Board, the Chief Executive Officer, the President or the Secretary. Such resignation shall be effective upon delivery unless it is specified to be effective at some later time or upon the happening of some later event.

2.10 Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and place as shall be determined from time to time by the Board of Directors; provided that any director who is absent when such a determination is made shall be given notice of the determination. A regular meeting of the Board of Directors may be held without notice immediately after and at the same place as the annual meeting of stockholders.

2.11 Special Meetings. Special meetings of the Board of Directors may be held at any time and place designated in a call by the Chairman of the Board, the Chief Executive Officer, the President, two or more directors, or by one director in the event that there is only a single director in office.

2.12 Notice of Special Meetings. Notice of the date, place, if any, and time of any special meeting of directors shall be given to each director by the Secretary or by the officer or one of the directors calling the meeting. Notice shall be duly given to each director (a) in person or by telephone at least 24 hours in advance of the meeting, (b) by sending written notice by reputable overnight courier, telecopy, facsimile or electronic transmission, or delivering written notice by hand, to such director's last known business, home or electronic transmission address at least 48 hours in advance of the meeting, or (c) by sending written notice by first-class mail to such director's last known business or home address at least 72 hours in advance of the meeting. A notice or waiver of notice of a meeting of the Board of Directors need not specify the purposes of the meeting.

2.13 Meetings by Conference Communications Equipment. Directors may participate in meetings of the Board of Directors or any committee thereof by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation by such means shall constitute presence in person at such meeting.

2.14 Action by Consent. Any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent to the action in writing or by electronic transmission, and the written consents or electronic transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

2.15 Committees. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the corporation with such lawfully delegable powers and duties as the Board of Directors thereby confers, to serve at the pleasure of the Board of Directors. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members of the committee present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors and subject to the provisions of law, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation and may authorize the seal of the corporation to be affixed to all papers which may require it. Each such committee shall keep minutes and make such reports as the Board of Directors may from time to time request. Except as the Board of Directors may otherwise determine, any committee may make rules for the conduct of its business, but unless otherwise provided by the directors or in such rules, its business shall be conducted as nearly as possible in the same manner as is provided in these Bylaws for the Board of Directors. Except as otherwise provided in the Certificate of Incorporation, these Bylaws, or the resolution of the Board of Directors designating the committee, a committee may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and delegate to a subcommittee any or all of the powers and authority of the committee.

2.16 Compensation of Directors. Directors may be paid such compensation for their services and such reimbursement for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any director from serving the corporation or any of its parent or subsidiary entities in any other capacity and receiving compensation for such service.

ARTICLE III

OFFICERS

3.1 Titles. The officers of the corporation shall consist of a Chief Executive Officer, a President, a Secretary, a Treasurer and such other officers with such other titles as the Board of Directors shall determine, including one or more Vice Presidents, Assistant Treasurers and Assistant Secretaries. The Board of Directors may appoint such other officers as it may deem appropriate.

3.2 Election. The Chief Executive Officer, President, Treasurer and Secretary shall be elected annually by the Board of Directors at its first meeting following the annual meeting of stockholders. Other officers may be appointed by the Board of Directors at such meeting or at any other meeting.

3.3 Qualification. No officer need be a stockholder. Any two or more offices may be held by the same person.

3.4 Tenure. Except as otherwise provided by law, by the Certificate of Incorporation or by these Bylaws, each officer shall hold office until such officer's successor is elected and qualified, unless a different term is specified in the resolution electing or appointing such officer, or until such officer's earlier death, resignation or removal.

3.5 Resignation and Removal. Any officer may resign by delivering a written resignation to the corporation at its principal office or to the Chief Executive Officer, the President or the Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some later time or upon the happening of some later event. Any officer may be removed at any time, with or without cause, by vote of a majority of the directors then in office. Except as the Board of Directors may otherwise determine, no officer who resigns or is removed shall have any right to any compensation as an officer for any period following such officer's resignation or removal, or any right to damages on account of such removal, whether such officer's compensation be by the month or by the year or otherwise, unless such compensation is expressly provided for in a duly authorized written agreement with the corporation.

3.6 Vacancies. The Board of Directors may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Treasurer and Secretary. Each such successor shall hold office for the unexpired term of such officer's predecessor and until a successor is elected and qualified, or until such officer's earlier death, resignation or removal.

3.7 President; Chief Executive Officer. Unless the Board of Directors has designated another person as the corporation's Chief Executive Officer, the President shall be the Chief Executive Officer of the corporation. The Chief Executive Officer shall have general charge and supervision of the business of the corporation subject to the direction of the Board of Directors, and shall perform all duties and have all powers that are commonly incident to the office of chief executive or that are delegated to such officer by the Board of Directors. The President shall perform such other duties and shall have such other powers as the Board of Directors or the Chief Executive Officer (if the President is not the Chief Executive Officer) may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer or the President (if the President is not the Chief Executive Officer), the Vice President (or if there shall be more than one, the Vice Presidents in the order determined by the Board of Directors) shall perform the duties of the Chief Executive Officer and when so performing such duties shall have all the powers of and be subject to all the restrictions upon the Chief Executive Officer.

3.8 Vice Presidents. Each Vice President shall perform such duties and possess such powers as the Board of Directors or the Chief Executive Officer may from time to time

prescribe. The Board of Directors may assign to any Vice President the title of Executive Vice President, Senior Vice President or any other title selected by the Board of Directors.

3.9 Secretary and Assistant Secretaries. The Secretary shall perform such duties and shall have such powers as the Board of Directors or the Chief Executive Officer may from time to time prescribe. In addition, the Secretary shall perform such duties and have such powers as are incident to the office of the secretary, including without limitation the duty and power to give notices of all meetings of stockholders and special meetings of the Board of Directors, to attend all meetings of stockholders and the Board of Directors and keep a record of the proceedings, to maintain a stock ledger and prepare lists of stockholders and their addresses as required, to be custodian of corporate records and the corporate seal and to affix and attest to the same on documents.

Any Assistant Secretary shall perform such duties and possess such powers as the Board of Directors, the Chief Executive Officer or the Secretary may from time to time prescribe. In the event of the absence, inability or refusal to act of the Secretary, the Assistant Secretary (or if there shall be more than one, the Assistant Secretaries in the order determined by the Board of Directors) shall perform the duties and exercise the powers of the Secretary.

In the absence of the Secretary or any Assistant Secretary at any meeting of stockholders or directors, the chairman of the meeting shall designate a temporary secretary to keep a record of the meeting.

3.10 Treasurer and Assistant Treasurers. The Treasurer shall perform such duties and shall have such powers as may from time to time be assigned by the Board of Directors or the Chief Executive Officer. In addition, the Treasurer shall perform such duties and have such powers as are incident to the office of treasurer, including without limitation the duty and power to keep and be responsible for all funds and securities of the corporation, to deposit funds of the corporation in depositories selected in accordance with these Bylaws, to disburse such funds as ordered by the Board of Directors, to make proper accounts of such funds, and to render as required by the Board of Directors statements of all such transactions and of the financial condition of the corporation.

The Assistant Treasurers shall perform such duties and possess such powers as the Board of Directors, the Chief Executive Officer or the Treasurer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Treasurer, the Assistant Treasurer (or if there shall be more than one, the Assistant Treasurers in the order determined by the Board of Directors) shall perform the duties and exercise the powers of the Treasurer.

3.11 Salaries. Officers of the corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board of Directors.

3.12 Delegation of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

ARTICLE IV

CAPITAL STOCK

4.1 Issuance of Stock. Subject to the provisions of the Certificate of Incorporation, the whole or any part of any unissued balance of the authorized capital stock of the corporation or the whole or any part of any shares of the authorized capital stock of the corporation held in the corporation's treasury may be issued, sold, transferred or otherwise disposed of by vote of the Board of Directors in such manner, for such lawful consideration and on such terms as the Board of Directors may determine.

4.2 Stock Certificates; Uncertificated Shares. The shares of the corporation shall be represented by certificates, provided that the Board of Directors may provide by resolution or resolutions that some or all of any or all classes or series of the corporation's stock shall be uncertificated shares. Every holder of stock of the corporation represented by certificates shall be entitled to have a certificate, in such form as may be prescribed by law and by the Board of Directors, representing the number of shares held by such holder registered in certificate form. Each such certificate shall be signed in a manner that complies with Section 158 of the General Corporation Law of the State of Delaware.

Each certificate for shares of stock which are subject to any restriction on transfer pursuant to the Certificate of Incorporation, these Bylaws, applicable securities laws or any agreement among any number of stockholders or among such holders and the corporation shall have conspicuously noted on the face or back of the certificate either the full text of the restriction or a statement of the existence of such restriction.

If the corporation shall be authorized to issue more than one class of stock or more than one series of any class, the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of each certificate representing shares of such class or series of stock, provided that in lieu of the foregoing requirements there may be set forth on the face or back of each certificate representing shares of such class or series of stock a statement that the corporation will furnish without charge to each stockholder who so requests a copy of the full text of the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

Within a reasonable time after the issuance or transfer of uncertificated shares, the corporation shall send to the registered owner thereof a written notice containing the information required to be set forth or stated on certificates pursuant to Sections 151, 202(a) or 218(a) of the General Corporation Law of the State of Delaware or, with respect to Section 151 of the General Corporation Law of the State of Delaware, a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

4.3 Transfers. Shares of stock of the corporation shall be transferable in the manner prescribed by law and in these Bylaws. Transfers of shares of stock of the corporation shall be made only on the books of the corporation or by transfer agents designated to transfer shares of stock of the corporation. Subject to applicable law, shares of stock represented by certificates shall be transferred only on the books of the corporation by the surrender to the corporation or its transfer agent of the certificate representing such shares properly endorsed or accompanied by a written assignment or power of attorney properly executed, and with such proof of authority or the authenticity of signature as the corporation or its transfer agent may reasonably require. Except as may be otherwise required by law, by the Certificate of Incorporation or by these Bylaws, the corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect to such stock, regardless of any transfer, pledge or other disposition of such stock until the shares have been transferred on the books of the corporation in accordance with the requirements of these Bylaws.

4.4 Lost, Stolen or Destroyed Certificates. The corporation may issue a new certificate of stock in place of any previously issued certificate alleged to have been lost, stolen or destroyed, upon such terms and conditions as the Board of Directors may prescribe, including the presentation of reasonable evidence of such loss, theft or destruction and the giving of such indemnity and posting of such bond as the Board of Directors may require for the protection of the corporation or any transfer agent or registrar.

4.5 Record Date. The Board of Directors may fix in advance a date as a record date for the determination of the stockholders entitled to notice of or to vote at any meeting of stockholders or to express consent (or dissent) to corporate action without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action. Such record date shall not precede the date on which the resolution fixing the record date is adopted, and such record date shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 10 days after the date of adoption of a record date for a consent without a meeting, nor more than 60 days prior to any other action to which such record date relates.

If no record date is fixed, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day before the day on which notice is given, or, if notice is waived, at the close of business on the day before the day on which the meeting is held. If no record date is fixed, the record date for determining stockholders entitled to express consent to corporate action without a meeting, when no prior action by the Board of Directors is necessary, shall be the day on which the first consent is properly delivered to the corporation. If no record date is fixed, the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating to such purpose.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

4.6 Regulations. The issue, transfer, conversion and registration of shares of stock of the corporation shall be governed by such other regulations as the Board of Directors may establish.

ARTICLE V

GENERAL PROVISIONS

5.1 Fiscal Year. Except as from time to time otherwise designated by the Board of Directors, the fiscal year of the corporation shall begin on the first day of January of each year and end on the last day of December in each year.

5.2 Corporate Seal. The corporate seal shall be in such form as shall be approved by the Board of Directors.

5.3 Waiver of Notice. Whenever notice is required to be given by law, by the Certificate of Incorporation or by these Bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before, at or after the time of the event for which notice is to be given, shall be deemed equivalent to notice required to be given to such person. Neither the business nor the purpose of any meeting need be specified in any such waiver. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

5.4 Voting of Securities. Except as the Board of Directors may otherwise designate, the Chief Executive Officer, the President or the Treasurer may waive notice of, vote, or appoint any person or persons to vote, on behalf of the corporation at, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for this corporation (with or without power of substitution) at, any meeting of stockholders or securityholders of any other entity, the securities of which may be held by this corporation.

5.5 Evidence of Authority. A certificate by the Secretary, or an Assistant Secretary, or a temporary Secretary, as to any action taken by the stockholders, directors, a committee or any officer or representative of the corporation shall as to all persons who rely on the certificate in good faith be conclusive evidence of such action.

5.6 Certificate of Incorporation. All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the corporation, as amended and in effect from time to time.

5.7 Severability. Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

5.8 Pronouns. All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

ARTICLE VI

AMENDMENTS

6.1 By the Board of Directors. These Bylaws may be altered, amended or repealed, in whole or in part, or new Bylaws may be adopted by the Board of Directors.

6.2 By the Stockholders. These Bylaws may be altered, amended or repealed, in whole or in part, or new Bylaws may be adopted by the affirmative vote of the holders of a majority of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at any annual meeting of stockholders, or at any special meeting of stockholders, provided notice of such alteration, amendment, repeal or adoption of new Bylaws shall have been stated in the notice of such special meeting.

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY APPLICABLE STATE SECURITIES LAWS, AND MAY NOT BE SOLD, PLEDGED OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION THEREOF UNDER THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS, OR PURSUANT TO RULE 144 OR AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS.

WARRANT TO PURCHASE STOCK

Corporation:	GENERATE BIOMEDICINES, INC.
Number of Shares:	See below
Class of Stock:	Series A Preferred Stock
Initial Exercise Price:	$1.00 per share
Issue Date:	July 10, 2020
Expiration Date:	July 10, 2030

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, the receipt of which is hereby acknowledged, **PACIFIC WESTERN BANK** or its permitted assignee or transferee ("***Holder***") is entitled to purchase up to the number of fully paid and nonassessable shares of Series A Preferred Stock (the "***Shares***") of **GENERATE BIOMEDICINES, INC.**, a Delaware corporation (the "***Company***"), at the initial exercise price per Share (the "***Warrant Price***") as set forth above and as adjusted pursuant to the terms of this warrant, subject to the provisions and upon the terms and conditions set forth in this warrant. This warrant shall be exercisable for a number of Shares equal to (a) 1.25% of the aggregate original principal amount of all Term Loans made pursuant to the Loan and Security Agreement (the "***Loan Agreement***") of even date herewith, between the Company and Pacific Western Bank, divided by (b) the Warrant Price (subject to appropriate adjustment in the event of a stock dividend, stock split or other similar event affecting the Shares). For the avoidance of doubt, in no event shall this warrant be exercisable for more than 150,000 Shares (subject to appropriate adjustment in the event of a stock dividend, stock split or other similar event affecting the Shares). Reference is made to Section 4.4 of this warrant, whereby Pacific Western Bank shall transfer this warrant to its parent company, PacWest Bancorp.

ARTICLE 1

EXERCISE

1.1 Method of Exercise. Holder may exercise this warrant by delivering this warrant and a duly executed Notice of Exercise in substantially the form attached as Appendix 1 to the principal office of the Company. Unless Holder is exercising the conversion right set forth in Section 1.2, Holder shall also deliver to the Company a check for the aggregate Warrant Price for the Shares being purchased.

1.2 Conversion Right. In lieu of exercising this warrant as specified in Section 1.1, Holder may from time to time convert this warrant, in whole or in part, into a number of Shares determined by dividing (a) (i) the aggregate fair market value of the Shares or other securities otherwise issuable upon exercise of this warrant minus (ii) the aggregate Warrant Price of such Shares by (b) the fair market value of one Share. The fair market value of the Shares shall be determined pursuant to Section 1.3. In connection with each such conversion, or other exercise of this warrant pursuant to Section 1.1, Holder shall be deemed to have restated each of the representations and warranties in Section 3.5 of this warrant as of the date thereof.

1.3 Fair Market Value. If the Shares are traded regularly in a public market, the fair market value of the Shares shall be the closing price of the Shares (or the closing price of the Company's stock into which the Shares are convertible, calculated on an as-converted basis) reported for the business day immediately before Holder delivers its Notice of Exercise to the Company. If the Shares are not regularly traded in a public market, the Board of Directors of the Company shall determine fair market value in its reasonable good faith judgment.

1.4 Delivery of Certificate and New Warrant. Promptly after Holder exercises this Warrant and the Company receives payment of the aggregate Warrant Price or converts this warrant, the Company shall deliver to Holder certificates for the Shares acquired or, if such Shares are not certificated, the Company shall reflect Holder's ownership of such Shares by book entry in the Company's books and records and, if this warrant has not been fully exercised or converted and has not expired, the Company shall deliver to Holder a new warrant representing the Shares not so acquired.

1.5 Replacement of Warrants. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company or, in the case of mutilation, upon surrender and cancellation of this warrant, the Company at its expense shall execute and deliver, in lieu of this warrant, a new warrant of like tenor.

1.6 Treatment of Warrant Upon Acquisition of the Company.

1.6.1 "***Acquisition***." For the purpose of this warrant, "Acquisition" means (a) any sale, exclusive license, or other disposition of all or substantially all of the assets (including intellectual property) of the Company, or (b) any reorganization, consolidation, merger or sale of the voting securities of the Company (other than a merger or consolidation effective exclusively to change the Company's domicile) or any other transaction, in each case, where the holders of the Company's securities before the transaction beneficially own less than 50% of the outstanding voting securities of the surviving entity after the transaction (other than a bona fide equity financing exclusively for capital raising purposes in which the Company sells and issues equity securities to institutional investors).

1.6.2 Exercise Upon Acquisition . Upon the closing of any Acquisition in which the consideration to be received by the Company's stockholders consists of cash, marketable securities, or a combination of both cash and marketable securities, this warrant shall be deemed to have been automatically converted pursuant to Section 1.2, and thereafter Holder shall participate in the Acquisition on the same terms as other holders of the same class of securities of the Company; *provided, however*, that if the fair market value of the Shares, as determined pursuant to Section 1.3, in connection with such Acquisition is less than the aggregate Warrant Price, then this warrant shall terminate without exercise or conversion immediately prior, and subject, to the closing of such Acquisition.

1.6.3 Assumption of Warrant. Upon the closing of any Acquisition not referred to in Section 1.6.2, the successor entity shall assume the obligations of this warrant, and this warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid at the closing of such Acquisition for the Shares issuable upon exercise of the unexercised portion of this warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this warrant; *provided, however*, that if the fair market value of the Shares, as determined pursuant to Section 1.3, in connection with such Acquisition is less than the aggregate Warrant Price, then this warrant shall terminate without exercise or conversion immediately prior, and subject, to the closing of such Acquisition.

ARTICLE 2

ADJUSTMENTS TO THE SHARES

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend on its common stock payable in common stock, or other securities, or subdivides the outstanding common stock into a greater amount of common stock, then upon exercise of this warrant, for each Share acquired, Holder shall receive, without cost to Holder, the total number and kind of securities to which Holder would have been entitled had Holder owned the Shares of record as of the date the dividend or subdivision occurred.

2.2 Reclassification, Exchange or Substitution. Upon any reclassification, exchange, substitution, or other event that results in a change of the number and/or class of the securities issuable upon exercise or conversion of this warrant, or any consolidation or merger of the Company with or into another entity, or any transfer of all or substantially all of the assets of the Company, as part of any such reclassification, exchange, substitution or other event, or any such consolidation, merger or sale, lawful provision shall be made so that the Holder thereafter shall be

entitled to receive, upon exercise or conversion of this warrant, the number and kind of securities and property that Holder would have received for the Shares if this warrant had been exercised immediately before such reclassification, exchange, substitution, or other event, or such consolidation, merger or sale. Such an event shall include, without limitation, any automatic conversion of the outstanding or issuable securities of the Company of the same class or series as the Shares to common stock pursuant to the terms of the Company's Amended and Restated Certificate of Incorporation, as amended and/or restated from time to time (the "***Certificate of Incorporation***"), upon the closing of a registered public offering of the Company's common stock. The Company or its successor shall promptly issue to Holder a new warrant, in replacement hereof, for such new securities or other property. The new warrant shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article 2 including, without limitation, adjustments to the Warrant Price and to the number of securities or property issuable upon exercise of the new warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, substitutions, or other events, or consolidations, mergers or sales.

2.3 Adjustments for Combinations, Etc. If the outstanding Shares are combined or consolidated, by reclassification, reverse split or otherwise, into a lesser number of Shares, the Warrant Price shall be proportionately increased and the number of Shares issuable under this Warrant shall be proportionately decreased. If the outstanding Shares are subdivided, split or multiplied, by reclassification, a stock dividend resulting in the issuance of additional Shares or otherwise, into a greater number of Shares, the Warrant Price shall be proportionately decreased and the number of Shares issuable under this Warrant shall be proportionately increased.

2.4 Certificate as to Adjustments. Upon each adjustment of the Warrant Price, the Company at its expense shall promptly compute such adjustment, and furnish Holder with a certificate of its Chief Financial Officer setting forth such adjustment and the facts upon which such adjustment is based. The Company shall, upon written request, furnish Holder a certificate setting forth the Warrant Price in effect upon the date thereof and the series of adjustments leading to such Warrant Price.

2.5 Fractional Shares. No fractional Shares shall be issuable upon exercise or conversion of this Warrant and the Number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional share interest arises upon any exercise or conversion of this Warrant, the Company shall eliminate such fractional share interest by paying Holder, at Holder's request, an amount computed by multiplying the fractional interest by the fair market value of a full Share, as determined by the Company's Board of Directors.

ARTICLE 3

REPRESENTATIONS AND COVENANTS OF THE COMPANY AND HOLDER

3.1 Representations and Warranties of the Company. The Company hereby represents and warrants to the Holder as follows as of the Issue Date:

(a) The initial Warrant Price referenced on the first page of this warrant is not greater than the lowest price per share at which the Company has sold any share of Series A Preferred Stock as of the Issue Date.

(b) All Shares which may be issued upon the exercise of the purchase right represented by this Warrant, and all securities, if any, issuable upon conversion of the Shares, in accordance with the Certificate of Incorporation, shall, upon issuance, be duly authorized, validly issued, fully paid and nonassessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws.

(c) The Company's capitalization table delivered to Holder is true and complete as of the Issue Date.

3.2 Notice of Certain Events. The Company shall provide Holder with not less than 5 days prior written notice of, including a description of the material facts surrounding, any of the following events: (a) declaration of any dividend or distribution upon its common stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend; (b) offering for subscription pro rata to the holders of any class or series of its stock any

additional shares of stock of any class or series or other rights (other than pursuant to contractual preemptive or other participation rights held by certain of the Company's stockholders); (c) effecting any reclassification or recapitalization of common stock; or (d) the merger or consolidation with or into any other corporation, or sale, lease, license, or conveyance of all or substantially all of its assets, or liquidation, dissolution or winding up.

3.3 Information Rights. Prior to the initial public offering of the Company's common stock, and for so long as the Holder holds this warrant and/or any of the Shares, the Company shall deliver to the Holder the financial information required to be delivered to "Major Investors" (as defined in that certain Investors' Rights Agreement among the Company and the other parties thereto dated as of September 26, 2019, as may be amended from time to time (the "***IRA***")) pursuant to Sections 3.1(a) and 3.1(b) of the IRA; *provided* that if any such information delivery requirement is waived pursuant to the terms of the IRA, the Company shall provide such information as and when delivered to Major Investors under the IRA; *provided*, *however*, the Company shall not be required to provide the foregoing so long as the Loan Agreement is in effect and the Company may cease providing the information set forth in this Section 3.3 during any period that it ceases providing similar information to its Major Investors pursuant to the terms of the IRA. The information rights set forth in this Section 3.3 shall terminate and be of no further force and effect upon the earliest of (a) the closing of the Company's initial public offering of its common stock pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "***Securities Act***"), (b) the consummation of a Deemed Liquidation Event (as defined in the Certificate of Incorporation) or (c) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Securities Exchange Act of 1934, as amended.

3.4 Registration Under Securities Act of 1933, as amended. The Company agrees that, upon exercise or conversion of this warrant, the shares of common stock issuable upon conversion of the Shares shall be deemed "Registrable Securities" and, solely for purposes of Sections 2 and 6 of the IRA, Holder shall be a "Holder", each as defined in the IRA, and hereby agrees to be bound by the IRA.

3.5 Holder Investment Representations. Holder makes the representations to the Company set forth in Exhibit A hereof in connection with the issuance of this warrant and the Shares (collectively, the "***Securities***").

3.6 Market Stand-off. Holder agrees that it shall be subject to the Market Stand-off provisions in Section 2.11 of the IRA or similar lock up provisions in the IRA.

3.7 Company Agreements. If upon exercise or conversion of this warrant (other than in connection with an Acquisition or an initial public offering of the Company's common stock) Holder continues to hold the Shares, upon the request of the Company, Holder shall execute a counterpart signature page to the investor and stockholder agreements governing the rights and obligations with respect to the Company's Series A Preferred Stock.

ARTICLE 4

MISCELLANEOUS

4.1 Term: Exercise Upon Expiration. This warrant is exercisable in whole or in part, at any time and from time to time on or before the Expiration Date set forth above. If this warrant has not been exercised prior to the Expiration Date, this warrant shall be deemed to have been automatically exercised on the Expiration Date by "cashless" conversion pursuant to Section 1.2.

4.2 Legends. This warrant and the Shares (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) shall be imprinted or notated with a legend in substantially the following form:

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR ANY APPLICABLE STATE SECURITIES LAWS, AND MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION THEREOF UNDER THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS, OR PURSUANT TO RULE 144 OR AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS.

4.3 Compliance with Securities Laws on Transfer. This warrant and the Shares issuable upon exercise or conversion of this warrant (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) may not be transferred or assigned in whole or in part without compliance with applicable federal and state securities laws by the transferor and the transferee and compliance with the terms of this warrant and Section 2 of the IRA. The Company shall not require Holder to provide an opinion of counsel if the transfer is to any affiliate of Holder (including PacWest Bancorp) or if there is no material question as to the availability of current information as referenced in Rule 144(c), Holder represents that it has complied with Rule 144(d) and (e) in reasonable detail, the selling broker represents that it has complied with Rule 144(f), and the Company is provided with a copy of Holder's notice of proposed sale.

4.4 Transfer Procedure. After receipt by Pacific Western Bank of this warrant, Pacific Western Bank will transfer all of this warrant to its parent company, PacWest Bancorp and, in connection with such transfer, PacWest Bancorp shall be deemed to have restated each of the representations and warranties set forth in Exhibit A hereof with respect to itself as of the date of such transfer. Subject to the provisions of Section 4.3, Holder may transfer all or part of this warrant or the Shares issuable upon exercise or conversion of this warrant (or the securities issuable, directly or indirectly, upon conversion of the Shares, if any) by giving the Company notice of the portion of the warrant being transferred setting forth the name, address and taxpayer identification number of the transferee and surrendering this warrant to the Company for reissuance to the transferee(s) (and Holder, if applicable). No surrender or reissuance shall be required for the transfer to an affiliate of Holder (including PacWest Bancorp). The terms and conditions of this warrant shall inure to the benefit of, and be binding upon, the Company and Holders hereof and their respective permitted successors and assigns.

4.5 Notices. All notices and other communications from the Company to the Holder, or vice versa, shall be deemed delivered and effective when given personally or mailed by first-class registered or certified mail, postage prepaid, at such address as may have been furnished to the Company or the Holder, as the case may be, in writing by the Company or such Holder from time to time.

All notices to the Holder shall be addressed as follows:

PACWEST BANCORP
Attn: Warrant Administrator
406 Blackwell Street, Suite 240
Durham, NC 27701

All notices to the Company shall be addressed as follows:

GENERATE BIOMEDICINES, INC.
55 Cambridge Pkwy, STE 800E
Cambridge, MA 02142
Attn: Finance

4.6 Amendments. This warrant and any term hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of such amendment change, waiver, discharge or termination is sought.

4.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

4.8 Governing Law. This warrant shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to its principles regarding conflicts of law that would result in the application of the laws of any other jurisdiction.

4.9 WAIVER OF JURY TRIAL. HOLDER AND THE COMPANY ACKNOWLEDGE THAT THE RIGHT TO TRIAL BY JURY IS A CONSTITUTIONAL RIGHT, BUT ONE THAT MAY BE WAIVED. AFTER CONSULTING (OR HAVING HAD THE OPPORTUNITY TO CONSULT) WITH COUNSEL OF THEIR CHOICE, KNOWINGLY AND VOLUNTARILY, AND FOR THEIR MUTUAL BENEFIT, HOLDER AND THE COMPANY WAIVE ANY RIGHT TO TRIAL BY JURY IN THE EVENT OF LITIGATION REGARDING THE PERFORMANCE OR ENFORCEMENT OF, OR IN ANY WAY RELATED TO, THIS AGREEMENT.

4.10 Counterparts. This Warrant may be executed in counterparts, all of which taken together shall constitute one and the same instrument.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned has executed this Warrant to Purchase Stock as of the date set forth above.

GENERATE BIOMEDICINES, INC.

By: /s/ Lovisa Afzelius

Name: Lovisa Afzelius

Title: President

Acknowledged and agreed:

PACIFIC WESTERN BANK

By: Scott Hansen

Name: /s/ Scott Hansen

Title: Executive Vice President

[Signature Page to Warrant to Purchase Stock]

APPENDIX 1
NOTICE OF EXERCISE

1. The undersigned hereby elects to purchase _____ shares of the _____ stock of **GENERATE BIOMEDICINES, INC.**, pursuant to the terms of the attached warrant, and tenders herewith payment of the purchase price of such shares in full.

1. The undersigned hereby elects to convert the attached warrant into shares in the manner specified in the warrant. This conversion is exercised with respect to _____ of the shares covered by the warrant.

[Strike paragraph that does not apply.]

2. Please issue a certificate or certificates representing said shares in the name of the undersigned or in such other name as is specified below:

_____
(Holder's Name)

_____
_____
(Address)

3. The undersigned represents it is acquiring the shares solely for its own account and not as a nominee for any other party and not with a view toward the resale or distribution thereof except in compliance with applicable securities laws. In support thereof, the undersigned hereby represents and warrants to the Company that the representations and warranties set forth in Exhibit A of the warrant are true and correct as of the date of exercise as to the undersigned.

4. The undersigned acknowledges that it has reviewed the market stand-off provisions set forth in Section 2.11 of the IRA or similar lock up provisions in the IRA and agrees to be bound by such provisions.

[PACIFIC WESTERN BANK][PACWEST BANCORP] or Registered Assignee

_____
(Signature)

_____
(Date)

EXHIBIT A

INVESTMENT REPRESENTATIONS

a) Holder is aware of the Company's business affairs and financial condition, and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Holder is purchasing the Securities for its own account for investment purposes only, not as a nominee or agent, and not with a view towards, or for resale in connection with, any "distribution" thereof for purposes of the Securities Act of 1933, as amended (the "***Securities Act***"). Holder has such knowledge and experience in financial business matters and Holder is capable of evaluating the merits and risks of the purchase of the Securities and of protecting its interests in connection therewith.

b) Holder understands that the Securities have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Holder's investment intent as expressed herein.

c) Holder further understands that the Securities must be held indefinitely, and Holder must therefore bear the economic risk therewith, unless the Securities are subsequently registered under the Securities Act or unless an exemption from registration is otherwise available. In addition, Holder understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless they are registered or such registration is not required.

d) Holder is familiar with the provisions of Rule 144, promulgated pursuant to the Securities Act, which, in substance, permits limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions.

e) The Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires, among other things, the existence of a public market for the Securities, the availability of certain current public information about the Company, the resale occurring not less than one year after a party has purchased and paid for the security to be sold, the sales being effected through a "broker's transaction" or in transactions directly with a "market maker" and the number of securities being sold during any three-month period not exceeding specified limitations.

f) Holder further understands that in the event that all of the applicable requirements of Rule 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required.

g) Holder is an "accredited investor" as defined in Rule 501(a) of Regulation D promulgated under the Securities Act.

GENERATE BIOMEDICINES, INC.
2019 EQUITY INCENTIVE PLAN

Updated as of February 19, 2024

ARTICLE I.
PURPOSE.

The purpose of the Plan is to advance the interests of the Company's stockholders by enhancing the Company's ability to attract, retain and motivate persons who make (or are expected to make) important contributions to the Company by providing such persons with equity ownership opportunities and thereby better aligning the interests of such persons with those of the Company's stockholders. Capitalized terms used in the Plan are defined in Article XI below.

ARTICLE II.
ELIGIBILITY.

Service Providers are eligible to be granted Awards under the Plan, subject to the limitations described herein.

ARTICLE III.
ADMINISTRATION AND DELEGATION.

3.1 Administration. The Plan will be administered by the Administrator. The Administrator shall have authority to determine which Service Providers will receive Awards, to grant Awards and to set all terms and conditions of Awards (including, but not limited to, vesting, exercise and forfeiture provisions). In addition, the Administrator shall have the authority to take all actions and make all determinations contemplated by the Plan and to adopt, amend and repeal such administrative rules, guidelines and practices relating to the Plan as it shall deem advisable. The Administrator may correct any defect or ambiguity, supply any omission or reconcile any inconsistency in the Plan or any Award in the manner and to the extent it shall deem necessary or appropriate to carry the Plan and any Awards into effect, as determined by the Administrator. The Administrator shall make all determinations under the Plan in the Administrator's sole discretion and all such determinations shall be final and binding on all persons having or claiming any interest in the Plan or in any Award.

3.2 Appointment of Committees. To the extent permitted by Applicable Laws, the Board may delegate any or all of its powers under the Plan to one or more Committees. The Board may abolish any Committee at any time and re-vest in itself any previously delegated authority.

ARTICLE IV.
STOCK AVAILABLE FOR AWARDS.

4.1 Number of Shares. Subject to adjustment under Article VIII hereof, Awards may be made under the Plan covering up to 44,000,000 shares of Common Stock. If any Award expires or lapses or is terminated, surrendered or canceled without having been fully exercised or is forfeited in whole or in part (including, without limitation, as the result of shares of Common Stock subject to such Award being repurchased by the Company at or below the original issuance price), in any case in a manner that results in any shares of Common Stock covered by such Award not being issued or being so reacquired by the Company, the unused Common Stock covered by such Award shall again be available for the grant of Awards under the Plan. Further, shares of Common Stock delivered (either by actual delivery or attestation)

to the Company by a Participant to satisfy the applicable exercise or purchase price of an Award and/or to satisfy any applicable tax withholding obligation (including, without limitation, shares retained by the Company from the Award being exercised or purchased and/or creating the tax obligation) shall be added to the number of shares of Common Stock available for the grant of Awards under the Plan. However, in the case of Incentive Stock Options, the foregoing provisions shall be subject to any limitations under the Code. Shares of Common Stock issued under the Plan may consist in whole or in part of authorized but unissued shares, shares purchased on the open market or treasury shares.

4.2 Substitute Awards. In connection with a merger or consolidation of an entity with the Company or the acquisition by the Company of property or stock of an entity, the Administrator may grant Awards in substitution for any options or other stock or stock-based awards granted prior to such merger or consolidation by such entity or an affiliate thereof. Substitute Awards may be granted on such terms as the Administrator deems appropriate in the circumstances, notwithstanding any limitations on Awards contained in the Plan. Substitute Awards shall not count against the overall share limit set forth in Section 4.1 hereof, except as may be required by reason of Section 422 of the Code.

ARTICLE V.
STOCK OPTIONS.

5.1 General. The Administrator may grant Options to any Service Provider, subject to the limitations on Incentive Stock Options described below. The Administrator shall determine the number of shares of Common Stock to be covered by each Option, the exercise price of each Option and the conditions and limitations applicable to the exercise of each Option, including, without limitation, conditions relating to Applicable Laws, as it considers necessary or advisable.

5.2 Incentive Stock Options. The Administrator may grant Options intended to qualify as Incentive Stock Options only to employees of the Company, any of the Company's present or future "parent corporations" or "subsidiary corporations" as defined in Sections 424(e) or (f) of the Code, respectively, and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code. All Options intended to qualify as Incentive Stock Options shall be subject to and shall be construed consistently with the requirements of Section 422 of the Code. Neither the Company nor the Administrator shall have any liability to a Participant, or any other party, (i) if an Option (or any part thereof) which is intended to qualify as an Incentive Stock Option fails to qualify as an Incentive Stock Option or (ii) for any action or omission by the Administrator that causes an Option not to qualify as an Incentive Stock Option, including, without limitation, the conversion of an Incentive Stock Option to a Non-Qualified Stock Option or the grant of an Option intended as an Incentive Stock Option that fails to satisfy the requirements under the Code applicable to an Incentive Stock Option. Any Option that is intended to qualify as an Incentive Stock Option, but fails to so qualify for any reason, including, without limitation, the portion of any Option becoming exercisable in excess of the $100,000 limitation described in Treasury Regulation Section 1.4224, shall be treated as a Non-Qualified Stock Option for all purposes.

5.3 Exercise Price. The Administrator shall establish the exercise price of each Option and specify the exercise price in the applicable Award Agreement. The exercise price shall be not less than 100% of the Fair Market Value on the date the Option is granted. In the case of an Incentive Stock Option granted to an employee who, at the time of grant of the Option, owns (or is treated as owning under Section 424 of the Code) stock representing more than 10% of the voting power of all classes of stock of the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Sections 424(e) or 424(f) of the Code, respectively), the per share exercise price shall be no less than 110% of the Fair Market Value on the date the Option is granted.

5.4 Duration of Options. Each Option shall be exercisable at such times and subject to such terms and conditions as the Administrator may specify in the applicable Award Agreement, provided that the term of any Option shall not exceed ten years. In the case of an Incentive Stock Option granted to an employee who, at the time of grant of the Option, owns (or is treated as owning under Section 424 of the Code) stock representing more than 10% of the voting power of all classes of stock of the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Sections 424(e) or 424(f) of the Code, respectively), the term of the Option shall not exceed five years.

5.5 Exercise of Option; Notification of Disposition. Options may be exercised by delivery to the Company of a written notice of exercise, in a form approved by the Administrator (which may be an electronic form), signed by the person authorized to exercise the Option, together with payment in full (i) as specified in Section 5.6 hereof for the number of shares for which the Option is exercised and (ii) as specified in Section 9.5 hereof for any applicable withholding taxes. Unless otherwise determined by the Administrator, an Option may not be exercised for a fraction of a share of Common Stock. If an Option is designated as an Incentive Stock Option, the Participant shall give prompt notice to the Company of any disposition or other transfer of any shares of Common Stock acquired from the Option if such disposition or transfer is made (i) within two years from the grant date with respect to such Option or (ii) within one year after the transfer of such shares to the Participant (other than any such disposition made in connection with a Change in Control). Such notice shall specify the date of such disposition or other transfer and the amount realized, in cash, other property, assumption of indebtedness or other consideration, by the Participant in such disposition or other transfer.

5.6 Payment Upon Exercise. Common Stock purchased upon the exercise of an Option granted under the Plan shall be paid for in cash, by wire transfer of immediately available funds or by check, payable to the order of the Company, or, subject to Section 10.8, any Company insider trading policy (including, without limitation, any blackout periods) and Applicable Laws, by:

(a) If the Company is a Publicly Listed Company, unless the Administrator otherwise determines, (A) delivery of an irrevocable and unconditional undertaking by a broker acceptable to the Company to deliver promptly to the Company sufficient funds to pay the exercise price, or (B) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company cash or a check sufficient to pay the exercise price, provided in either case, that such amount is paid to the Company at such time as may be required by the Administrator;

(b) delivery (either by actual delivery or attestation) of shares of Common Stock owned by the Participant valued at their Fair Market Value, provided (A) such method of payment is then permitted under Applicable Laws, (B) such Common Stock, if acquired directly from the Company, was owned by the Participant for such minimum period of time, if any, as may be established by the Company at any time, and (C) such Common Stock is not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements;

(c) to the extent permitted by the Administrator, surrendering shares of Common Stock then issuable upon exercise of the Option valued at their Fair Market Value on the date of exercise;

(d) to the extent permitted by the Administrator, delivery of a promissory note of the Participant to the Company on terms determined by the Administrator;

(e) to the extent permitted by the Administrator, delivery of property of any other kind which constitutes good and valuable consideration as determined by the Administrator; or

(f) any combination of the above permitted forms of payment (including, without limitation, cash or check).

5.7 Early Exercise of Options. The Administrator may provide in the terms of an Award Agreement that the Service Provider may exercise an Option in whole or in part prior to the full vesting of the Option in exchange for unvested shares of Restricted Stock with respect to any unvested portion of the Option so exercised. Shares of Restricted Stock acquired upon the exercise of any unvested portion of an Option shall be subject to such terms and conditions as the Administrator shall determine.

ARTICLE VI.
RESTRICTED STOCK; RESTRICTED STOCK UNITS.

6.1 General. The Administrator may grant Restricted Stock, or the right to purchase Restricted Stock, to any Service Provider, subject to the right of the Company to repurchase all or part of such shares at their issue price or other stated or formula price from the Participant (or to require forfeiture of such shares if issued at no cost) in the event that conditions specified by the Administrator in the applicable Award Agreement are not satisfied prior to the end of the applicable restriction period or periods established by the Administrator for such Award. In addition, the Administrator may grant to Service Providers Restricted Stock Units, which may be subject to vesting and forfeiture conditions during applicable restriction period or periods, as set forth in an applicable Award Agreement.

6.2 Terms and Conditions for All Restricted Stock and Restricted Stock Unit Awards. The Administrator shall determine and set forth in the applicable Award Agreement the terms and conditions applicable to each Restricted Stock and Restricted Stock Unit Award, including, without limitation, the conditions for vesting and repurchase (or forfeiture) and the issue price, in each case, if any.

6.3 Additional Provisions Relating to Restricted Stock.

(a) *Dividends*. Participants holding shares of Restricted Stock will be entitled to all ordinary cash dividends paid with respect to such shares to the extent such dividends have a record date that is on or after the date on which the Participant to whom such Restricted Shares are granted becomes the record holder of such Restricted Shares, unless otherwise provided by the Administrator in the applicable Award Agreement. In addition, unless otherwise provided by the Administrator, if any dividends or distributions are paid in shares, or consist of a dividend or distribution to holders of Common Stock of property other than an ordinary cash dividend, the shares or other property will be subject to the same restrictions on transferability and forfeitability as the shares of Restricted Stock with respect to which they were paid. Each dividend payment will be made as provided in the applicable Award Agreement, but in no event later than the end of the calendar year in which the dividends are paid to stockholders of that class of stock or, if later, the 15th day of the third month following the later of (A) the date the dividends are paid to stockholders of that class of stock, and (B) the date the dividends are no longer subject to forfeiture.

(b) *Stock Certificates*. The Company may require that any stock certificates issued in respect of shares of Restricted Stock be deposited in escrow by the Participant, together with a stock power endorsed in blank, with the Company (or its designee).

6.4 Additional Provisions Relating to Restricted Stock Units.

(a) *Settlement*. Upon the vesting of a Restricted Stock Unit, the Participant shall be entitled to receive from the Company one share of Common Stock or an amount of cash or other property equal to the Fair Market Value of one share of Common Stock on the settlement date, as the Administrator shall determine and as provided in the applicable Award Agreement. The Administrator may provide that

settlement of Restricted Stock Units shall occur upon or as soon as reasonably practicable after the vesting of the Restricted Stock Units or shall instead be deferred, on a mandatory basis or at the election of the Participant, in a manner that complies with Section 409A.

(b) *Voting Rights*. A Participant shall have no voting rights with respect to any Restricted Stock Units unless and until shares are delivered in settlement thereof.

(c) *Dividend Equivalents*. To the extent provided by the Administrator, a grant of Restricted Stock Units may provide a Participant with the right to receive Dividend Equivalents. Dividend Equivalents may be paid currently or credited to an account for the Participant, may be settled in cash and/or shares of Common Stock and may be subject to the same restrictions on transfer and forfeitability as the Restricted Stock Units with respect to which the Dividend Equivalents are paid, as determined by the Administrator, subject, in each case, to such terms and conditions as the Administrator shall establish and set forth in the applicable Award Agreement.

ARTICLE VII.
OTHER STOCK-BASED AWARDS.

Other Stock-Based Awards may be granted hereunder to Participants, including, without limitation, Awards entitling Participants to receive shares of Common Stock to be delivered in the future. Such Other Stock-Based Awards shall also be available as a form of payment in the settlement of other Awards granted under the Plan, as stand-alone payments and/or as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock-Based Awards may be paid in shares of Common Stock, cash or other property, as the Administrator shall determine. Subject to the provisions of the Plan, the Administrator shall determine the terms and conditions of each Other Stock-Based Award, including, without limitation, any purchase price, transfer restrictions, vesting conditions and other terms and conditions applicable thereto, which shall be set forth in the applicable Award Agreement.

ARTICLE VIII.
ADJUSTMENTS FOR CHANGES IN COMMON STOCK AND CERTAIN OTHER EVENTS.

8.1 Certain Transactions or Events. In the event that the Administrator determines that any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), reorganization, merger, consolidation, combination, repurchase, recapitalization, liquidation, dissolution, or sale, transfer, exchange or other disposition of assets of the Company, or sale or exchange of Common Stock or other securities of the Company, issuance of warrants or other rights to purchase Common Stock or other securities of the Company, or other similar corporate transaction or event, as determined by the Administrator, affects the Common Stock such that an adjustment is determined by the Administrator to be appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any Award, then the Administrator may, in such manner as it may deem equitable, adjust any or all of:

(a) the number and kind of shares of Common Stock (or other securities or property) with respect to which Awards may be granted or awarded (including, but not limited to, adjustments of the limitations in Section 4.1 hereof on the maximum number and kind of shares which may be issued);

(b) the number and kind of shares of Common Stock (or other securities or property) subject to outstanding Awards;

(c) the grant or exercise price with respect to any Award; and

(d) the terms and conditions of any Awards (including, without limitation, any applicable financial or other performance "targets" specified in an Award Agreement).

8.2 Additional Transactions or Events. In the event of any transaction or event described in Section 8.1 hereof (including, without limitation any change in control) or any unusual or nonrecurring transaction or event affecting the Company or the financial statements or financial condition of the Company, or any change in any Applicable Laws or accounting principles, the Administrator, on such terms and conditions as it deems appropriate, either by the terms of the Award or by action taken and either automatically or upon the Participant's request, is hereby authorized to take any one or more of the following actions whenever the Administrator determines that such action is appropriate in order to (x) prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any Award granted or issued under the Plan, (y) to facilitate such transaction or event or (z) give effect to such changes in Applicable Laws or accounting principles:

(a) To provide for the cancellation of any such Award in exchange for either an amount of cash or other property with a value equal to the amount that could have been obtained upon the exercise or settlement of the vested portion of such Award or realization of the Participant's rights under the vested portion of such Award, as applicable; provided that, if the amount that could have been obtained upon the exercise or settlement of the vested portion of such Award or realization of the Participant's rights, in any case, is equal to or less than zero, then the vested portion of such Award may be terminated without payment;

(b) To provide that such Award shall vest and, to the extent applicable, be exercisable as to all shares covered thereby, notwithstanding anything to the contrary in the Plan or the provisions of such Award;

(c) To provide that such Award be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by awards covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and applicable exercise or purchase price, in all cases, as determined by the Administrator;

(d) To make adjustments in the number and type of shares of Common Stock (or other securities or property) subject to outstanding Awards, and/or in the terms and conditions of (including, without limitation, the grant or exercise price), and the criteria included in, outstanding Awards;

(e) To replace such Award with other rights or property selected by the Administrator; and/or

(f) To provide that the Award will terminate and cannot vest, be exercised or become payable after the applicable event.

8.3 Equity Restructurings. In connection with the occurrence of any Equity Restructuring, and notwithstanding anything to the contrary in this Article VIII, the Administrator will equitably adjust each outstanding Award, which adjustments may include adjustments to the number and type of securities subject to each outstanding Award and/or the exercise price or grant price thereof, if applicable, the grant of new Awards to Participants, and/or the making of a cash payment to Participants, as the Administrator deems appropriate to reflect such Equity Restructuring. The adjustments provided under this Section shall be nondiscretionary and shall be final and binding on the affected Participant and the Company; provided that whether an adjustment is equitable shall be determined by the Administrator.

8.4 Administrative Stand Still. In the event of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash

dividends) of Company assets to stockholders, or any other change affecting the shares of Common Stock or the share price of the Common Stock, including, without limitation, any Equity Restructuring, for reasons of administrative convenience the Administrator may refuse to permit the exercise of any Award during a period of up to thirty days prior to the consummation of any such transaction.

8.5 Miscellaneous. Except as expressly provided in the Plan or pursuant to action of the Administrator under the Plan, no Participant shall have any rights by reason of any subdivision or consolidation of shares of stock of any class, the payment of any dividend, any increase or decrease in the number of shares of stock of any class or any dissolution, liquidation, merger, or consolidation of the Company or any other corporation. Except as expressly provided in the Plan or pursuant to action of the Administrator under the Plan, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number of shares of Common Stock subject to an Award or the grant or exercise price of any Award. The existence of the Plan, any Award Agreements and the Awards granted hereunder shall not affect or restrict in any way the right or power of the Company to make or authorize (i) any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, (ii) any merger, consolidation dissolution or liquidation of the Company or sale of Company assets or (iii) any sale or issuance of securities, including, without limitation, securities with rights superior to those of the Common Stock or which are convertible into or exchangeable for Common Stock. The Administrator may treat Participants and Awards (or portions thereof) differently under this Article VIII.

ARTICLE IX.
GENERAL PROVISIONS APPLICABLE TO AWARDS.

9.1 Transferability. Except as the Administrator may otherwise determine or provide in an Award Agreement or otherwise, in any case in accordance with Applicable Laws, neither Awards nor any interest therein shall not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution, and, during the life of the Participant, shall be exercisable only by the Participant. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees.

9.2 Documentation. Each Award shall be evidenced in an Award Agreement, which may be in such form (written, electronic or otherwise) as the Administrator shall determine. Each Award may contain terms and conditions in addition to those set forth in the Plan.

9.3 Discretion. Except as otherwise provided by the Plan, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award to a Participant need not be identical, and the Administrator need not treat Participants or Awards (or portions thereof) uniformly.

9.4 Termination of Status. The Administrator shall determine the effect on an Award of the disability, death, retirement, authorized leave of absence or any other change or purported change in a Participant's Service Provider status and the extent to which, and the period during which, the Participant, the Participant's legal representative, conservator, guardian or Designated Beneficiary may exercise rights under the Award, if applicable.

9.5 Withholding. Each Participant shall pay to the Company, or make provision satisfactory to the Administrator for payment of, any taxes required by law to be withheld in connection with Awards to such Participant no later than the date of the event creating the tax liability. Except as the Administrator may otherwise determine, all such payments shall be made in cash, by wire transfer of immediately available funds or by certified check. Notwithstanding the foregoing, Participants may satisfy such tax obligations, subject to Section 10.8, any Company insider trading policy (including blackout periods) and

Applicable Laws, (i) to the extent permitted by the Administrator, in whole or in part by delivery of Shares, including Shares retained from the Award creating the tax obligation, valued at their Fair Market Value, and (ii) if there is a public market for Shares at the time the tax obligations are satisfied, unless the Administrator otherwise determines, (A) delivery (including, without limitation, telephonically to the extent permitted by the Company) of an irrevocable and unconditional undertaking by a broker acceptable to the Company to deliver promptly to the Company sufficient funds to satisfy the tax obligations, or (B) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company cash or a check sufficient to satisfy the tax withholding; provided that such amount is paid to the Company at such time as may be required by the Administrator. The Company may, to the extent permitted by Applicable Laws, deduct any such tax obligations based on minimum statutory withholding rates from any payment of any kind otherwise due to a Participant.

9.6 Amendment of Award. The Administrator may amend, modify or terminate any outstanding Award, including but not limited to, substituting therefor another Award of the same or a different type, changing the date of exercise or settlement, and converting an Incentive Stock Option to a Non-Qualified Stock Option. The Participant's consent to such action shall be required unless (i) the Administrator determines that the action, taking into account any related action, would not materially and adversely affect the Participant, or (ii) the change is permitted under Article VIII and Section 10.6 hereof.

9.7 Conditions on Delivery of Stock. The Company will not be obligated to deliver any shares of Common Stock pursuant to the Plan or to remove restrictions from shares previously delivered under the Plan until (i) all conditions of the Award have been met or removed to the satisfaction of the Company, (ii) in the opinion of the Company's counsel, all other legal matters in connection with the issuance and delivery of such shares have been satisfied, including, without limitation, any applicable securities laws and any applicable stock exchange or stock market rules and regulations, and (iii) the Participant has executed and delivered to the Company such representations or agreements as the Administrator deems necessary or appropriate to satisfy the requirements of any Applicable Laws. The inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is determined by the Administrator to be necessary to the lawful issuance and sale of any securities hereunder, shall relieve the Company of any liability in respect of the failure to issue or sell such shares as to which such requisite authority shall not have been obtained.

9.8 Acceleration. The Administrator may at any time provide that any Award shall become vested and/or exercisable in full or in part, free of some or all restrictions or conditions, or otherwise realizable in full or in part, as the case may be.

ARTICLE X.
MISCELLANEOUS.

10.1 No Right To Employment or Other Status. No person shall have any claim or right to be granted an Award, and the grant of an Award shall not be construed as giving a Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan or any Award, except as expressly provided in an applicable Award Agreement.

10.2 No Rights As Stockholder; Certificates. Subject to the provisions of the applicable Award Agreement, no Participant or Designated Beneficiary shall have any rights as a stockholder with respect to any shares of Common Stock to be distributed with respect to an Award until becoming the record holder of such shares. Notwithstanding any other provision of the Plan, unless otherwise determined by the Administrator or required by any Applicable Laws, the Company shall not be required to deliver to any

Participant certificates evidencing shares of Common Stock issued in connection with any Award and instead such shares of Common Stock may be recorded in the books of the Company (or, as applicable, its transfer agent or stock plan administrator). The Company may place legends on stock certificates issued under the Plan deemed necessary or appropriate by the Administrator in order to comply with Applicable Laws.

10.3 Effective Date and Term of Plan. The Plan shall become effective on the date on which it is adopted by the Board. No Awards shall be granted under the Plan after the completion of ten years from the earlier of (i) the date on which the Plan was adopted by the Board or (ii) the date the Plan was approved by the Company's stockholders, but Awards previously granted may extend beyond that date in accordance with the terms of the Plan.

10.4 Amendment of Plan. The Administrator may amend, suspend or terminate the Plan or any portion thereof at any time; provided that no amendment of the Plan shall materially and adversely affect (as determined by the Administrator) any Award outstanding at the time of such amendment without the consent of the affected Participant. Awards outstanding under the Plan at the time of any suspension or termination of the Plan shall continue to be governed in accordance with the terms of the Plan and the applicable Award Agreement, as in effect prior to such suspension or termination. The Board shall obtain stockholder approval of any Plan amendment to the extent necessary to comply with Applicable Laws.

10.5 Provisions for Foreign Participants. The Administrator may modify Awards granted to Participants who are foreign nationals or employed outside the United States or establish subplans or procedures under the Plan to address differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

10.6 Section 409A.

(a) *General*. The Company intends that all Awards be structured in compliance with, or to satisfy an exemption from, Section 409A, such that no adverse tax consequences, interest, or penalties under Section 409A apply in connection with any Awards. Notwithstanding anything herein or in any Award Agreement to the contrary, the Administrator may, without a Participant's prior consent, amend this Plan and/or Awards, adopt policies and procedures, or take any other actions (including, without limitation, amendments, policies, procedures and actions with retroactive effect) as are necessary or appropriate to preserve the intended tax treatment of Awards under the Plan, including, without limitation, any such actions intended to (A) exempt this Plan and/or any Award from the application of Section 409A, and/or (B) comply with the requirements of Section 409A, including, without limitation any such regulations, guidance, compliance programs and other interpretative authority that may be issued after the date of grant of any Award. The Company makes no representations or warranties as to the tax treatment of any Award under Section 409A or otherwise. The Company shall have no obligation under this Section 10(f) or otherwise to take any action (whether or not described herein) to avoid the imposition of taxes, penalties or interest under Section 409A with respect to any Award and shall have no liability to any Participant or any other person if any Award, compensation or other benefits under the Plan are determined to constitute non-compliant, "nonqualified deferred compensation" subject to the imposition of taxes, penalties and/or interest under Section 409A.

(b) *Separation from Service*. With respect to any Award that constitutes "nonqualified deferred compensation" under Section 409A, any payment or settlement of such Award that is to be made upon a termination of a Participant's Service Provider relationship shall, to the extent necessary to avoid the imposition of taxes under Section 409A, be made only upon the Participant's "separation from service" (within the meaning of Section 409A), whether such "separation from service" occurs upon or subsequent to the termination of the Participant's Service Provider relationship. For purposes of any such provision of

this Plan or any Award Agreement relating to any such payments or benefits, references to a "termination," "termination of employment" or like terms shall mean "separation from service."

(c) *Payments to Specified Employees*. Notwithstanding any contrary provision in the Plan or any Award Agreement, any payment(s) of "nonqualified deferred compensation" that are otherwise required to be made under an Award to a "specified employee" (as defined under Section 409A and determined by the Administrator) as a result of his or her "separation from service" shall, to the extent necessary to avoid the imposition of taxes under Code Section 409A(a)(2)(B)(i), be delayed until the expiration of the six-month period immediately following such "separation from service" (or, if earlier, until the date of death of the specified employee) and shall instead be paid (in a manner set forth in the Award agreement) on the day that immediately follows the end of such six-month period or as soon as administratively practicable thereafter (without interest). Any payments of "nonqualified deferred compensation" under such Award that are, by their terms, payable more than six months following the Participant's "separation from service" shall be paid at the time or times such payments are otherwise scheduled to be made.

10.7 Limitations on Liability. Notwithstanding any other provisions of the Plan, no individual acting as a director, officer, other employee or agent of the Company will be liable to any Participant, former Participant, spouse, beneficiary, or any other person for any claim, loss, liability, or expense incurred in connection with the Plan or any Award, nor will such individual be personally liable with respect to the Plan because of any contract or other instrument he or she executes in his or her capacity as an Administrator, director, officer, other employee or agent of the Company. The Company will indemnify and hold harmless each director, officer, other employee and agent of the Company to whom any duty or power relating to the administration or interpretation of the Plan has been or will be granted or delegated, against any cost or expense (including, without limitation, attorneys' fees) or liability (including, without limitation, any sum paid in settlement of a claim with the Administrator's approval) arising out of any act or omission to act concerning this Plan unless arising out of such person's own fraud or bad faith.

10.8 Lock-Up Period. By accepting an Award, each Participant agrees that the Participant will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to an initial public offering of any of the Company's securities and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days, or such other period as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports, and (2) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2241 or NYSE Rule 472(f)(4)), (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock held immediately before the effective date of the registration statement for such offering or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Section shall apply only to an initial public offering of the Company's securities and shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement for such initial public offering. The underwriters in connection with such registration are intended third-party beneficiaries of this Section and shall have the right, power, and authority to enforce the provisions hereof as though they were a party hereto. Each Participant further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Section or that are necessary to give further effect thereto.

10.9 Right of First Refusal.

(a) Before any shares of Common Stock held by a Participant or any permitted transferee (each, a "***Holder***") may be sold, pledged, assigned, hypothecated, transferred, or otherwise disposed of (each, a "***Transfer***"), the Company or its assignee(s) shall have a right of first refusal to purchase the shares of Common Stock proposed to be Transferred on the terms and conditions set forth in this Section 10.9 (the "***Right of First Refusal***"). In the event that the Company's charter, bylaws and/or a stockholders' agreement applicable to the shares of Common Stock contain a right of first refusal with respect to the shares of Common Stock, such right of first refusal shall apply to the shares of Common Stock to the extent such provisions are more restrictive than the Right of First Refusal set forth in this Section 10.9 and the Right of First Refusal set forth in this Section 10.9 shall not in any way restrict the operation of the Company's charter, bylaws or the operation of any applicable stockholders' agreement. In the event any Holder desires to Transfer any shares of Common Stock, the Holder shall deliver to the Company a written notice (the "***Notice***") stating: (A) the Holder's bona fide intention to sell or otherwise Transfer such shares of Common Stock; (B) the name of each proposed purchaser or other transferee ("***Proposed Transferee***"); (C) the number of shares of Common Stock to be Transferred to each Proposed Transferee; and (D) the price for which the Holder proposes to Transfer the shares of Common Stock (the "***Offered Price***"), and the Holder shall offer such shares of Common Stock at the Offered Price to the Company or its assignee(s).

(b) Within twenty-five days after receipt of the Notice, the Company and/or its assignee(s) may elect in writing to purchase all, but not less than all, of the shares of Common Stock proposed to be Transferred to any one or more of the Proposed Transferees by delivery of a written exercise notice to the Holder (a "***Company Notice***"). The purchase price ("***Purchase Price***") for the shares of Common Stock repurchased under this Section 10.9 shall be the Offered Price.

(c) Payment of the Purchase Price shall be made, at the option of the Company or its assignee(s), in cash (by check or wire transfer), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof, within five days after delivery of the Company Notice or in the manner and at the times mutually agreed to by the Company and the Holder. Should the Offered Price specified in the Notice be payable in property other than cash, the Company or its assignee shall have the right to pay the purchase price in the form of cash equal in amount to the value of such property, as determined by the Administrator.

(d) If all or a portion of the shares of Common Stock proposed in the Notice to be Transferred are not purchased by the Company and/or its assignee(s) as provided in this Section 10.9, then the Holder may sell or otherwise Transfer such shares of Common Stock to that Proposed Transferee at the Offered Price or at a higher price; provided that such sale or other Transfer is consummated within sixty days after the date of the Notice; and provided, further, that any such sale or other Transfer is effected in accordance with any Applicable Laws and the Proposed Transferee agrees in writing that the provisions of this Plan and the applicable Award Agreement and any other applicable agreements governing the shares of Common Stock to be Transferred shall continue to apply to the shares of Common Stock in the hands of such Proposed Transferee. If the shares of Common Stock described in the Notice are not Transferred to the Proposed Transferee within such sixty-day period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal, as provided herein, before any shares of Common Stock held by the Holder may be sold or otherwise Transferred.

(e) Anything to the contrary contained in this Section 10.9 notwithstanding and to the extent permitted by the Administrator, the Transfer of any or all of the shares of Common Stock during a Participant's lifetime or upon a Participant's death by will or intestacy to the Participant's Immediate Family or a trust for the benefit of the Participant's Immediate Family shall be exempt from the Right of First Refusal. As used herein, "***Immediate Family***" shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister or stepchild (whether or not adopted). In such case, the transferee or other recipient shall receive and hold the shares of Common Stock so Transferred subject to the provisions of this Plan (including, without limitation, the Right of First Refusal), the applicable Award Agreement and any other applicable agreements governing the shares of Common Stock to be Transferred, and there shall be no further Transfer of such shares of Common Stock except in accordance with the terms of this Section 10.9 (or otherwise as expressly provided under the Plan).

(f) The Right of First Refusal shall terminate as to all shares of Common Stock if the Company becomes a Publicly Listed Company upon such occurrence.

10.10 Data Privacy. As a condition of receipt of any Award, each Participant explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of personal data as described in this paragraph by and among, as applicable, the Company and its subsidiaries and affiliates for the exclusive purpose of implementing, administering and managing the Participant's participation in the Plan. The Company and its subsidiaries and affiliates may hold certain personal information about a Participant, including but not limited to, the Participant's name, home address and telephone number, date of birth, social security or insurance number or other identification number, salary, nationality, job title(s), any shares of stock held in the Company or any of its subsidiaries and affiliates, details of all Awards, in each case, for the purpose of implementing, managing and administering the Plan and Awards (the "***Data***"). The Company and its subsidiaries and affiliates may transfer the Data amongst themselves as necessary for the purpose of implementation, administration and management of a Participant's participation in the Plan, and the Company and its subsidiaries and affiliates may each further transfer the Data to any third parties assisting the Company in the implementation, administration and management of the Plan. These recipients may be located in the Participant's country, or elsewhere, and the Participant's country may have different data privacy laws and protections than the recipients' country. Through acceptance of an Award, each Participant authorizes such recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing, administering and managing the Participant's participation in the Plan, including, without limitation, any requisite transfer of such Data as may be required to a broker or other third party with whom the Company or the Participant may elect to deposit any shares of Common Stock. The Data related to a Participant will be held only as long as is necessary to implement, administer, and manage the Participant's participation in the Plan. A Participant may, at any time, view the Data held by the Company with respect to such Participant, request additional information about the storage and processing of the Data with respect to such Participant, recommend any necessary corrections to the Data with respect to the Participant or refuse or withdraw the consents herein in writing, in any case without cost, by contacting his or her local human resources representative. The Company may cancel Participant's ability to participate in the Plan and, in the Administrator's discretion, the Participant may forfeit any outstanding Awards if the Participant refuses or withdraws his or her consents as described herein. For more information on the consequences of refusal to consent or withdrawal of consent, Participants may contact their local human resources representative.

10.11 Severability. In the event any portion of the Plan or any action taken pursuant thereto shall be held illegal or invalid for any reason, the illegality or invalidity shall not affect the remaining parts of the Plan, and the Plan shall be construed and enforced as if the illegal or invalid provisions had not been included, and the illegal or invalid action shall be null and void.

10.12 Governing Documents. In the event of any contradiction between the Plan and any Award Agreement or any other written agreement between a Participant and the Company or any Subsidiary of the Company that has been approved by the Administrator, the terms of the Plan shall govern, unless it is expressly specified in such Award Agreement or other written document that a specific provision of the Plan shall not apply.

10.13 Submission to Jurisdiction; Waiver of Jury Trial. By accepting an Award, each Participant irrevocably and unconditionally consents to submit to the exclusive jurisdiction of the courts of the State of Delaware and of the United States of America, in each case located in the State of Delaware, for any action arising out of or relating to the Plan (and agrees not to commence any litigation relating thereto except in such courts), and further agrees that service of any process, summons, notice or document by U.S. registered mail to the address contained in the records of the Company shall be effective service of process for any litigation brought against it in any such court. By accepting an Award, each Participant irrevocably and unconditionally waives any objection to the laying of venue of any litigation arising out of Plan or Award hereunder in the courts of the State of Delaware or the United States of America, in each case located in the State of Delaware, and further irrevocably and unconditionally waives and agrees not to plead or claim in any such court that any such litigation brought in any such court has been brought in an inconvenient forum. By accepting an Award, each Participant irrevocably and unconditionally waives, to the fullest extent permitted by applicable law, any and all rights to trial by jury in connection with any litigation arising out of or relating to the Plan or any Award hereunder.

10.14 Governing Law. The provisions of the Plan and all Awards made hereunder shall be governed by and interpreted in accordance with the laws of the State of Delaware, disregarding choice-of-law principles of the law of any state that would require the application of the laws of a jurisdiction other than such state.

10.15 Restrictions on Shares; Claw-back Provisions. Shares of Common Stock acquired in respect of Awards shall be subject to such terms and conditions as the Administrator shall determine, including, without limitation, restrictions on the transferability of shares of Common Stock, the right of the Company to repurchase shares of Common Stock, the right of the Company to require that shares of Common Stock be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements. Such terms and conditions may be additional to those contained in the Plan and may, as determined by the Administrator, be contained in the applicable Award Agreement or in an exercise notice, stockholders' agreement or in such other agreement as the Administrator shall determine, in each case in a form determined by the Administrator. The issuance of such shares of Common Stock shall be conditioned on the Participant's consent to such terms and conditions and the Participant's entering into such agreement or agreements. All Awards (including, without limitation, any proceeds, gains or other economic benefit actually or constructively received by Participant upon any receipt or exercise of any Award or upon the receipt or resale of any shares of Common Stock underlying the Award) shall be subject to the provisions of any claw-back policy implemented by the Company, including, without limitation, any claw-back policy adopted to comply with the requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act and any rules or regulations promulgated thereunder, to the extent set forth in such claw-back policy and/or in the applicable Award Agreement.

10.16 Titles and Headings. The titles and headings of the Sections in the Plan are for convenience of reference only and, in the event of any conflict, the text of the Plan, rather than such titles or headings, shall control.

10.17 Conformity to Securities Laws. Participant acknowledges that the Plan is intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any and all regulations and rules promulgated by the Securities and Exchange Commission thereunder, and state securities laws and regulations. Notwithstanding anything herein to the contrary, the Plan and all Awards granted hereunder shall be administered only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by Applicable Laws, the Plan and all Award Agreements shall be deemed amended to the extent necessary to conform to such laws, rules and regulations.

ARTICLE XI.

Definitions. As used in the Plan, the following words and phrases shall have the following meanings:

11.1 "***Administrator***" means the Board or a Committee to the extent that the Board's powers or authority under the Plan have been delegated to such Committee.

11.2 "***Applicable Laws***" means the requirements relating to the administration of equity incentive plans under U.S. federal and state securities, tax and other applicable laws, rules and regulations, the applicable rules of any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws and rules of any foreign country or other jurisdiction where Awards are granted or issued under the Plan.

11.3 "***Award***" means, individually or collectively, a grant under the Plan of Options, Restricted Stock, Restricted Stock Units or Other Stock-Based Awards.

11.4 "***Award Agreement***" means a written agreement evidencing an Award, which agreements may be in electronic medium and shall contain such terms and conditions with respect to an Award as the Administrator shall determine, consistent with and subject to the terms and conditions of the Plan.

11.5 "***Board***" means the Board of Directors of the Company.

11.6 "***Change in Control***" means (i) a merger or consolidation of the Company with or into any other corporation or other entity or person, (ii) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of the Company's assets, or (iii) any other transaction, including, without limitation, the sale by the Company of new shares of its capital stock or a transfer of existing shares of capital stock of the Company, the result of which is that a third party that is not an affiliate of the Company or its stockholders (or a group of third parties not affiliated with the Company or its stockholders) immediately prior to such transaction acquires or holds capital stock of the Company representing a majority of the Company's outstanding voting power immediately following such transaction; provided that the following events shall not constitute a "Change in Control": (A) a transaction (other than a sale of all or substantially all of the Company's assets) in which the holders of the voting securities of the Company immediately prior to the merger or consolidation hold, directly or indirectly, a majority of the voting securities in the successor corporation or its parent immediately after the merger or consolidation; (B) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of the Company's assets to an affiliate of the Company; (C) an initial public offering of any of the Company's securities or any other transaction or series of related transactions principally for bona fide equity financing purposes; (D) a reincorporation of the Company solely to change its jurisdiction; or (E) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held the Company's securities immediately before such transaction. Notwithstanding the foregoing, if a Change in Control would give rise to a payment or settlement event with respect to any Award that constitutes "nonqualified deferred compensation," the transaction or event constituting the Change in Control must also constitute a "change

in control event" (as defined in Treasury Regulation Section 1.409A-3(i)(5)) in order to give rise to the payment or settlement event for such Award, to the extent required by Section 409A.

11.7 "***Code***" means the Internal Revenue Code of 1986, as amended, and the regulations issued thereunder.

11.8 " ***Committee***" means one or more committees or subcommittees of the Board or the Company, which may be comprised of one or more directors and/or executive officers of the Company, in either case, to the extent permitted in accordance with Applicable Laws.

11.9 "***Common Stock***" means the common stock of the Company.

11.10 " ***Company***" means Generate Biomedicines, Inc., a Delaware corporation, or any successor thereto. Except where the context otherwise requires, the term "Company" includes any of the Company's present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Code and any other business venture (including, without limitation, joint venture or limited liability company) in which the Company has a significant interest, as determined by the Administrator.

11.11 "***Consultant***" means any person, including, without limitation, any advisor, engaged by the Company or a parent or subsidiary of the Company to render services to such entity if: (i) the consultant or adviser renders *bona fide* services to the Company; (ii) the services rendered by the consultant or advisor are not in connection with the offer or sale of securities in a capital-raising transaction and do not directly or indirectly promote or maintain a market for the Company's securities; and (iii) the consultant or advisor is a natural person, or such other advisor or consultant as is approved by the Administrator.

11.12 " ***Designated Beneficiary***" means the beneficiary or beneficiaries designated, in a manner determined by the Administrator, by a Participant to receive amounts due or exercise rights of the Participant in the event of the Participant's death or incapacity In the absence of an effective designation by a Participant, "Designated Beneficiary" shall mean the Participant's estate.

11.13 "***Director***" means a member of the Board.

11.14 "***Disability***" means a permanent and total disability within the meaning of Section 22(e)(3) of the Code, as it may be amended from time to time.

11.15 "***Dividend Equivalents***" means a right granted to a Participant pursuant to Section 6.4(c) hereof to receive the equivalent value (in cash or shares of Common Stock) of dividends paid on shares of Common Stock.

11.16 "***Employee***" means any person, including, without limitation, officers and Directors, employed by the Company (within the meaning of Section 3401 (c) of the Code) or any parent or subsidiary of the Company.

11.17 "***Equity Restructuring***" means, as determined by the Administrator, a non-reciprocal transaction between the Company and its stockholders, such as a stock dividend, stock split, spin-off or recapitalization through a large, nonrecurring cash dividend, that affects the shares of Common Stock (or other securities of the Company) or the share price of Common Stock (or other securities of the Company) and causes a change in the per share value of the Common Stock underlying outstanding Awards.

11.18 "***Exchange Act***" means the Securities Exchange Act of 1934, as amended.

11.19 "***Fair Market Value***" means, as of any date, the value of Stock determined as follows: (i) if the Common Stock is listed on any established stock exchange, its Fair Market Value shall be the closing sales price for such Common Stock as quoted on such exchange for such date, or if no sale occurred on such date, the first market trading day immediately prior to such date during which a sale occurred, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; (ii) if the Common Stock is not traded on a stock exchange but is quoted on a national market or other quotation system, the last sales price on such date, or if no sales occurred on such date, then on the date immediately prior to such date on which sales prices are reported, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or (iii) in the absence of an established market for the Common Stock, the Fair Market Value thereof shall be determined by the Administrator in its sole discretion.

11.20 "***Incentive Stock Option***" means an "incentive stock option" as defined in Section 422 of the Code.

11.21 "***Non-Qualified Stock Option***" means an Option that is not intended to be or otherwise does not qualify as an Incentive Stock Option.

11.22 "***Option***" means an option to purchase Common Stock.

11.23 "***Other Stock-Based Awards***" means other Awards of shares of Common Stock, and other Awards that are valued in whole or in part by reference to, or are otherwise based on, shares of Common Stock or other property.

11.24 "***Participant***" means a Service Provider who has been granted an Award under the Plan.

11.25 "***Plan***" means this 2019 Equity Incentive Plan.

11.26 "***Publicly Listed Company***" means that the Company or its successor (i) is required to file periodic reports pursuant to Section 12 of the Exchange Act and (ii) the Common Stock is listed on one or more National Securities Exchanges (within the meaning of the Exchange Act) or is quoted on NASDAQ or a successor interdealer quotation system.

11.27 "***Restricted Stock***" means Common Stock awarded to a Participant pursuant to Section 6.1 hereof that is subject to certain vesting conditions and other restrictions.

11.28 " ***Restricted Stock Unit***" means an unfunded, unsecured right to receive, on the applicable settlement date, one share of Common Stock or an amount in cash or other consideration determined by the Administrator equal to the value thereof as of such payment date, which right may be subject to certain vesting conditions and other restrictions.

11.29 " ***Section 409A***" means Section 409A of the Code and all regulations, guidance, compliance programs and other interpretative authority thereunder.

11.30 "***Securities Act***" means the Securities Act of 1933, as amended from time to time.

11.31 "***Service Provider***" means an Employee, Consultant or Director.

11.32 " ***Termination of Service***" means the date the Participant ceases to be a Service Provider.

* * * * *

CALIFORNIA SUPPLEMENT

This supplement is intended to satisfy the requirements of Section 25102(o) of the California Corporations Code and the regulations issued thereunder ("***Section 25102(o)***"). Notwithstanding anything to the contrary contained in the Plan and except as otherwise determined by the Administrator, the provisions set forth in this supplement shall apply to all Awards granted under the Plan to a Participant who is a resident of the State of California on the date of grant (a "***California Participant***") and which are intended to be exempt from registration in California pursuant to Section 25102(o), and otherwise to the extent required to comply with applicable law (but only to such extent). Definitions in the Plan are applicable to this supplement.

1. Limitation on Securities Issuable under the Plan. The amount of securities issued pursuant to the Plan shall not exceed the amounts permitted under section 260.140.45 of the California code of regulations to the extent applicable.

2. Additional Limitations For Grants. The terms of all Awards shall comply, to the extent applicable, with Section 260.140.41 and 260.140.42 of the California code of regulations.

3. Additional Requirement to Provide Information to California Participants. The Company shall provide to each California Participant, not less frequently than annually, copies of annual financial statements (which need not be audited). The company shall not be required to provide such statements to key persons whose duties in connection with the company assure their access to equivalent information. In addition, this information requirement shall not apply to any plan or agreement that complies with all conditions of Rule 701 of the Securities Act of 1933, as amended; provided that for purposes of determining such compliance, any registered domestic partner shall be considered a "family member" as that term is defined in Rule 701.

* * * * *

GENERATE BIOMEDICINES, INC.
2019 EQUITY INCENTIVE PLAN

RESTRICTED STOCK GRANT NOTICE

The participant set forth below ("***Participant***") has been granted Restricted Stock, subject to the terms and conditions of the Generate Biomedicines, Inc. 2019 Equity Incentive Plan, as amended from time to time (the "***Plan***"), and this Restricted Stock Agreement, which includes the terms in this Grant Notice (the "***Grant Notice***") and Exhibit A attached hereto (collectively, this "***Agreement***"). Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Agreement.

Participant:

Grant Date:

Vesting Commencement Date:

Total Number of Shares of Restricted Stock:

Type of Restricted Stock: Common Stock

Vesting Schedule:

Both the Company and Participant acknowledge and agree that this Agreement and the Plan constitute the entire agreement between the Company and Participant regarding the terms and conditions of the Restricted Stock awarded hereunder, and that the foregoing supersede all prior communications, agreements, and understandings, written or oral, with respect to the terms and conditions of such Restricted Stock. **ACCORDINGLY, PLEASE BE SURE TO READ ALL OF THIS AGREEMENT (INCLUDING THE GRANT NOTICE AND APPENDIX A) AND THE PLAN.**

GENERATE BIOMEDICINES, INC.:	**PARTICIPANT**
By: _____	_____
Name: _____	[Participant Name]
Title: _____	

Exhibit A

RESTRICTED STOCK AGREEMENT

As evidenced by this Agreement, the Company has awarded to Participant the number of shares of Restricted Stock under the Plan set forth in the Grant Notice.

ARTICLE I.
GENERAL

1.1 Definitions. All capitalized terms used in this Agreement without definition shall have the meanings ascribed in the Plan and the Grant Notice.

1.2 Incorporation of Terms. The Restricted Stock is subject to the terms and conditions of the Plan, which are incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan shall control. Participant hereby acknowledges receipt of a copy of the Plan and agrees to execute such further documents as may from time to time be requested by the Company to implement the terms of the Plan, including, without limitation, restrictions on the transferability of shares of Common Stock, the right of the Company to repurchase shares of Common Stock, the right of the Company to require that shares of Common Stock be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements in accordance with Section 10.15 of the Plan.

ARTICLE II.
AWARD OF RESTRICTED STOCK

2.1 Award of Restricted Stock.

(a) Award. On the Grant Date, the Company issued to Participant the number of shares of Restricted Stock set forth in the Grant Notice in consideration of Participant's agreement to remain in the service or employ of the Company or one of its subsidiaries, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged. Such shares of Restricted Stock and any dividends and distributions made or declared with respect to such shares, in each case, whether vested or unvested shall sometimes be referred to herein as "***Shares***."

(b) Book Entry Form; Certificates. At the sole discretion of the Administrator, the Shares will be issued in either (i) uncertificated form, with the Shares recorded in the name of Participant in the books and records of the Company's transfer agent with appropriate notations regarding the Restrictions; or (ii) certificate form subject to the terms of Section 2.1(c). For purposes of this Agreement, "***Restrictions***" shall mean the forfeiture provision in Section 2.2 and the other restrictions set forth in this Agreement or the Plan.

(c) Legend. Shares issued pursuant to this Agreement shall bear such legend or legends as shall be determined by the Administrator.

(d) Escrow. The Secretary of the Company or such other escrow holder as the Company may appoint may retain physical custody of any certificates representing the Shares until all of the Restrictions lapse or shall have been removed.

2.2 Restrictions.

(a) Forfeiture. The Restricted Stock shall vest in accordance with the vesting schedule set forth on the Grant Notice. Except as otherwise determined by the Administrator, any portion of the Restricted Stock which is not vested pursuant to the Grant Notice as of the date Participant incurs a Termination of Service shall automatically be forfeited by Participant on the date of such Termination of Service without any additional consideration therefore and without any further action by the Company.

(b) Tax Withholding; Conditions to Issuance of Certificates. Notwithstanding any other provision of this Agreement:

(i) Participant is ultimately liable and responsible for all taxes owed in connection with the Restricted Stock, regardless of any action the Company or any of its subsidiaries takes with respect to any tax withholding obligations that arise in connection with the Restricted Stock. Neither the Company nor any of its subsidiaries makes any representation or undertaking regarding the treatment of any tax withholding in connection with the awarding or vesting of the Restricted Stock or the subsequent sale of shares. The Company and its subsidiaries do not commit and are under no obligation to structure the Restricted Stock to reduce or eliminate Participant's tax liability.

(ii) Prior to any tax withholding becoming due, Participant must make arrangements acceptable to the Administrator to satisfy such withholding and must satisfy such tax withholdings when due. To the extent permitted by the Administrator, the Company (or the employing subsidiary) will withhold a portion of the shares of Restricted Stock that have an aggregate fair market value sufficient to pay the minimum federal, state and local income, employment and any other applicable taxes required to withheld by the Company or the employing subsidiary with respect to the shares. Notwithstanding any contrary provision of this Agreement, no vested Shares will be released from the Company unless and until satisfactory arrangements (as determined by the Administrator) will have been made by Participant with respect to the payment of any income and other taxes which the Company determines must be withheld or collected as of the vesting date with respect to such Shares. In addition and to the maximum extent permitted by Applicable Law, the Company (or the employing subsidiary) has the right to retain from salary or other amounts payable to Participant, cash having a value sufficient to satisfy any tax withholding obligations (based on minimum statutory rates) that are not satisfied by the withholding of otherwise deliverable Shares or any other arrangements made by Participant.

2.3 Rights as Stockholder. Except as otherwise provided herein, upon the Grant Date, Participant shall have all the rights of a stockholder with respect to the Shares, including without limitation the right to receive any cash or stock dividends or other distributions paid to or made with respect to the Shares, subject to the Restrictions herein.

2.4 Retained Distributions. The Company will retain custody of all cash dividends (without interest) and other distributions ("***Retained Distributions***") made or declared with respect to the Restricted Stock (and such Retained Distributions will be subject to the Restrictions and the other terms and conditions under this Agreement that are applicable to the Restricted Stock) until such time, if ever, as the Restricted Stock with respect to which such Retained Distributions shall have been made, paid or declared shall have become vested pursuant to the Grant Notice or, if earlier, tax withholding is otherwise due with respect to such Restricted Stock. Retained Distributions will automatically be forfeited upon forfeiture of the share of Restricted Stock with respect to which the Retained Distributions were paid or declared.

ARTICLE III.
OTHER PROVISIONS

3.1 Section 83(b) Election. Participant understands that Section 83(a) of the Code taxes as ordinary income the difference between the amount, if any, paid for the Shares and the fair market value of such Shares at the time the forfeiture provision on such Shares lapse or such Shares become transferable. Participant understands that, notwithstanding the preceding sentence, Participant may elect to be taxed at the time of the Grant Date, rather than at the time the forfeiture provision or transferability restriction lapses, by filing an election under Section 83(b) of the Code (an "***83(b) Election***") with the Internal Revenue Service within 30 days after the Grant Date. In the event Participant files an 83(b) Election, Participant will recognize ordinary income in an amount equal to the difference between the amount, if any, paid for the Shares and the Fair Market Value of such Shares as of the Grant Date. Participant acknowledges that the foregoing is only a summary of the effect of United States federal income taxation with respect to the Shares awarded hereunder, and does not purport to be complete. PARTICIPANT FURTHER ACKNOWLEDGES THAT THE COMPANY IS NOT RESPONSIBLE FOR FILING PARTICIPANT'S 83(b) ELECTION, AND THE COMPANY HAS DIRECTED PARTICIPANT TO SEEK INDEPENDENT ADVICE REGARDING THE APPLICABLE PROVISIONS OF THE INTERNAL REVENUE CODE, THE INCOME TAX LAWS OF ANY MUNICIPALITY, STATE OR FOREIGN COUNTRY IN WHICH PARTICIPANT MAY RESIDE, AND THE TAX CONSEQUENCES OF THIS AWARD AND PARTICIPANT'S PARTICIPATION IN THE PLAN. A sample 83(b) Election is attached hereto.

3.2 Governing Law; Severability. This Agreement shall be administered, interpreted and enforced under the laws of the State of Delaware, without regard to the conflicts of law principles thereof. Should any provision of this Agreement be determined by a court of law to be illegal or unenforceable, the other provisions shall nevertheless remain effective and shall remain enforceable.

3.3 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company at its principal executive offices in care of the Secretary of the Company, and any notice to be given to Participant shall be addressed to Participant at the most recent address for Participant shown in the Company's records. By a notice given pursuant to this Section 3.3, either party may hereafter designate a different address for notices to be given to that party. Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

3.4 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Agreement shall be binding upon Participant and his heirs, executors, administrators, successors and assigns.

3.5 Lock-Up Period. Participant agrees that Participant will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to an initial public offering of any of the Company's securities and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days, or such other period as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports, and (2) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2241 or NYSE Rule 472(f)(4)), (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock held immediately before the effective date of the

registration statement for such offering or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Section shall apply only to an initial public offering of the Company's securities and shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement for such initial public offering. The underwriters in connection with such registration are intended third-party beneficiaries of this Section and shall have the right, power, and authority to enforce the provisions hereof as though they were a party hereto. Participant further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Section or that are necessary to give further effect thereto.

* * * * *

ELECTION UNDER SECTION 83(B)
OF THE INTERNAL REVENUE CODE OF 1986

The undersigned taxpayer hereby elects, pursuant to Section 83(b) of the Internal Revenue Code of 1986, as amended, to include in taxpayer's gross income for the current taxable year the amount of any compensation taxable to taxpayer in connection with taxpayer's receipt of the property described below

1. The name, address, taxpayer identification number and taxable year of the undersigned are as follows:

NAME:
ADDRESS:
SOCIAL SECURITY NO.:
TAXABLE YEAR: 202_

2. The property with respect to which the election is made is described as follows: shares (the "Shares") of the common stock of Generate Biomedicines, Inc. (the "Company").

3. The date on which the property was transferred is: , 202_.

4. The property is subject to the following restrictions:

The Shares may not be transferred and are subject to forfeiture under the terms of an agreement between the taxpayer and the Company. These restrictions lapse upon the satisfaction of certain conditions contained in such agreement.

5. The fair market value at the time of transfer, determined without regard to any restriction other than a restriction which by its terms will never lapse, of the transferred property is: $_____.

6. The amount (if any) paid for such property is: $_____.

The undersigned has submitted a copy of this statement to the person for whom the services were performed in connection with the undersigned's receipt of the above-described property. The transferee of such property is the person performing the services in connection with the transfer of said property.

The undersigned understands that the foregoing election may not be revoked except with the consent of the Commissioner.

Dated: _____, _____

_____
Taxpayer

GENERATE BIOMEDICINES, INC.
2019 EQUITY INCENTIVE PLAN

STOCK OPTION GRANT NOTICE

Generate Biomedicines, Inc. (the "***Company***"), pursuant to its 2019 Equity Incentive Plan, as amended from time to time (the "***Plan***"), has granted to the participant set forth below ("***Participant***"), an Option to purchase the number of shares of the Company's Common Stock (referred to herein as "***Shares***") set forth below. The Option is subject to all of the terms and conditions as set forth herein and in the Stock Option Agreement attached hereto as Exhibit A (the "***Stock Option Agreement***") and the Plan, each of which is incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Stock Option Grant Notice and the Stock Option Agreement.

Participant:

Grant Date:

Vesting Commencement Date:

Exercise Price per Share:

Total Exercise Price:

Total Number of Shares Subject to Option:

Expiration Date:

Type of Option [Incentive Stock Option/Non-Qualified Stock Option]

Vesting Schedule:

By his or her signature and the Company's signature below, Participant agrees to be bound by the terms and conditions of the Plan, the Stock Option Agreement and this Grant Notice. Participant has reviewed the Stock Option Agreement, the Plan and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of this Grant Notice, the Stock Option Agreement and the Plan. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator of the Plan upon any questions arising under the Plan or the Option.

GENERATE BIOMEDICINES, INC.	**PARTICIPANT**
By: _____	_____
Name: _____	[Participant Name]
Title: _____	

Exhibit A

STOCK OPTION AGREEMENT

Generate Biomedicines, Inc. (the "***Company***") has granted to Participant an Option under the Company's 2019 Equity Incentive Plan, as amended from time to time (the "***Plan***"), to purchase the number of Shares indicated in the Stock Option Grant Notice ("***Grant Notice***") to which this Stock Option Agreement (this "***Agreement***") is attached.

ARTICLE I.
GENERAL

1.1 Defined Terms. Capitalized terms not specifically defined herein shall have the meanings specified in the Plan and the Grant Notice.

1.2 Incorporation of Terms of Plan. The Option is subject to the terms and conditions of the Plan which are incorporated herein by reference. In the event of a conflict between the terms of the Agreement and the Plan, the terms of the Plan shall control.

1.3 Grant of Option. In consideration of Participant's past and/or continued employment with or service to the Company or a parent or subsidiary and for other good and valuable consideration, effective as of the grant date set forth in the Grant Notice (the "***Grant Date***"), the Company irrevocably grants to Participant an Option to purchase any part or all of an aggregate of the number of Shares set forth in the Grant Notice, upon the terms and conditions set forth in the Plan and this Agreement. Unless designated as a Non-Qualified Stock Option in the Grant Notice, the Option shall be an Incentive Stock Option to the maximum extent permitted by law.

ARTICLE II.
PERIOD OF EXERCISABILITY

2.1 Vesting; Commencement of Exercisability.

(a) Subject to Sections 2.1(b) and 2.3, the Option shall become vested and exercisable in such amounts and at such times as are set forth in the vesting schedule in the Grant Notice (the "***Vesting Schedule***"), except that any Share as to which the Option would be fractionally vested will be accumulated and will vest and become exercisable only when a whole Share has accumulated.

(b) Unless otherwise determined by the Administrator, any portion of the Option that has not become vested and exercisable on or prior to the date of Participant's Termination of Service shall be forfeited on the date of Participant's Termination of Service and shall not thereafter become vested or exercisable.

2.2 Duration of Exercisability. The installments provided for in the Vesting Schedule are cumulative. Each such installment which becomes vested and exercisable pursuant to the Vesting Schedule shall remain vested and exercisable until it becomes unexercisable under Section 2.3 or pursuant to the terms of the Plan. Once the Option becomes unexercisable, it shall be forfeited immediately.

2.3 Expiration of Option. The Option may not be exercised to any extent by anyone after the first to occur of the following events:

(a) The Expiration Date set forth in the Grant Notice;

(b) The expiration of three months following the date of Participant's Termination of Service, unless such Termination of Service occurs by reason of Participant's death, Disability or Cause;

(c) The expiration of one year following the date of Participant's Termination of Service by reason of Participant's death or Disability; or

(d) The date of Participant's Termination of Service for Cause.

Participant acknowledges that an Incentive Stock Option exercised more than three months after Participant's termination of status as an Employee, other than by reason of death or Disability, will be taxed as a Non-Qualified Stock Option.

"***Cause***," means "Cause" (or any term of similar effect) as defined in Participant's employment agreement with the Company if such an agreement exists and contains a definition of Cause (or term of similar effect), or, if no such agreement exists or such agreement does not contain a definition of Cause (or term of similar effect), then Cause shall include, but not be limited to: (i) Participant's unauthorized use or disclosure of confidential information or trade secrets of the Company or any material breach of a written agreement between Participant and the Company, including without limitation a material breach of any employment, confidentiality, non-compete, non-solicit or similar agreement; (ii) Participant's commission of, indictment for or the entry of a plea of guilty or *nolo contendere* by Participant to, a felony under the laws of the United States or any state thereof or any crime involving dishonesty or moral turpitude (or any similar crime in any jurisdiction outside the United States); (iii) Participant's negligence or willful misconduct in the performance of Participant's duties or Participant's willful or repeated failure or refusal to substantially perform assigned duties; (iv) any act of fraud, embezzlement, material misappropriation or dishonesty committed by Participant against the Company; or (v) any acts, omissions or statements by Participant which the Company determines to be materially detrimental or damaging to the reputation, operations, prospects or business relations of the Company.

2.4 Special Tax Consequences. If the Option is intended to be an Incentive Stock Option, Participant acknowledges that, to the extent that the aggregate fair market value (determined as of the time the Option is granted) of all Shares with respect to which Incentive Stock Options, including, without limitation, the Option, are first exercisable for the first time by Participant in any calendar year exceeds $100,000 (or such other limitation as imposed by Section 422(d) of the Code), the Option and such other options (or the applicable portion thereof) shall be treated as not qualifying under Section 422 of the Code but rather shall be considered Non-Qualified Stock Options. Participant further acknowledges that the rule set forth in the preceding sentence shall be applied by taking Options and other "incentive stock options" into account in the order in which they were granted.

ARTICLE III.
EXERCISE OF OPTION

3.1 Person Eligible to Exercise. During the lifetime of Participant, only Participant may exercise the Option or any portion thereof. After the death of Participant, any exercisable portion of the Option may, prior to the time when the Option becomes unexercisable under Section 2.3, be exercised by Participant's personal representative or by any person empowered to do so under the deceased Participant's will or under the then applicable laws of descent and distribution.

3.2 Partial Exercise. Any exercisable portion of the Option or the entire Option, if then wholly exercisable, may be exercised in whole or in part at any time prior to the time when the Option or portion thereof becomes unexercisable under Section 2.3.

3.3 Manner of Exercise. The Option, or any exercisable portion thereof, may be exercised solely by delivery to the Secretary of the Company or the Secretary's office, or such other place as may be determined by the Administrator, of all of the following prior to the time when the Option or such portion thereof becomes unexercisable under Section 2.3:

(a) An exercise notice in substantially in the form attached as Exhibit B to the Grant Notice (or such other form as is prescribed by the Administrator) (the "***Exercise Notice***") in writing signed by Participant or any other person then entitled to exercise the Option or portion thereof, stating that the Option or portion thereof is thereby exercised, such notice complying with all applicable rules established by the Administrator; and

(b) Full payment for Shares with respect to which the Option or portion thereof is exercised in accordance with Section 5.6 of the Plan; and

(c) The receipt by the Company of full payment for any applicable withholding tax in cash, by wire transfer of immediately available funds, by check or in such other form as is permitted by the Plan; and

(d) In the event the Option or portion thereof shall be exercised pursuant to Section 3.1 by any person or persons other than Participant, appropriate proof of the right of such person or persons to exercise the Option.

ARTICLE IV.
OTHER PROVISIONS

4.1 Restrictive Legends and Stop-Transfer Orders.

(a) Participant agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(b) The Company shall not be required: (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement, or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such shares shall have been so transferred.

4.2 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company at its principal executive offices in care of the Secretary of the Company, and any notice to be given to Participant shall be addressed to Participant at the most recent address for Participant shown in the Company's records. By a notice given pursuant to this Section 4.2, either party may hereafter designate a different address for notices to be given to that party. Any notice which is required to be given to Participant shall, if Participant is then deceased, be given to the person entitled to exercise his or her Option by written notice under this Section 4.2. Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

4.3 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

4.4 Governing Law; Severability. This Agreement and the Exercise Notice shall be administered, interpreted and enforced under the laws of the State of Delaware, without regard to the conflicts of law principles thereof. Should any provision of this Agreement be determined by a court of law to be illegal or unenforceable, the other provisions shall nevertheless remain effective and shall remain enforceable.

4.5 Conformity to Securities Laws. Participant acknowledges that the Plan is intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any and all regulations and rules promulgated by the Securities and Exchange Commission thereunder, and state securities laws and regulations. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the Option is granted and may be exercised, only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by applicable law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to such laws, rules and regulations.

4.6 Successors and Assigns. The Company may assign any of its rights under this Agreement and the Exercise Notice to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Agreement shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns.

4.7 Entire Agreement. The Plan and this Agreement (including, without limitation, all Exhibits hereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

4.8 Lock-Up Period. Participant agrees that Participant will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to an initial public offering of any of the Company's securities and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days, or such other period as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports, and (2) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2241 or NYSE Rule 472(f)(4)), (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock held immediately before the effective date of the registration statement for such offering or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Section shall apply only to an initial public offering of the Company's securities and shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement for such initial public offering. The underwriters in connection with such registration are intended third-party beneficiaries of this Section and shall have the right, power, and authority to enforce the provisions hereof as though they were a party hereto. Participant further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Section or that are necessary to give further effect thereto.

Exhibit A

TO STOCK OPTION AGREEMENT
FORM OF EXERCISE NOTICE

Effective as of today, _____, _____, the undersigned ("***Participant***") hereby elects to exercise Participant's option to purchase Shares of Generate Biomedicines, Inc. (the "***Company***") under and pursuant to the Generate Biomedicines, Inc. 2019 Equity Incentive Plan (the "***Plan***") and the Stock Option Agreement dated _____, _____ (the "***Option Agreement***"). Capitalized terms used herein without definition shall have the meanings given in the Option Agreement.

Grant Date:	_____
Number of Shares as to which Option is Exercised:	_____
	$_____
Exercise Price per Share:	
Total Exercise Price:	$_____
Certificate to be issued in name of:	_____
Cash Payment delivered herewith:	$_____ (Representing the full Exercise Price for the Shares, as well as any applicable withholding tax)
Type of Option:	☐ Incentive Stock Option ☐ Non-Qualified Stock Option

1. Representations of Participant.

(a) Participant acknowledges that Participant has received, read and understood the Plan and the Option Agreement. Participant agrees to abide by and be bound by their terms and conditions.

(b) Participant acknowledges that Participant is purchasing the Shares for Participant's own account for investment only, and not with a view to, or for sale in connection with, any distribution of the Shares in violation of the Securities Act of 1933, as amended (the "***Securities Act***"), or any rule or regulation under the Securities Act.

(c) Participant has had such opportunity as Participant has deemed adequate to obtain from representatives of the Company such information as is necessary to permit Participant to evaluate the merits and risks of Participant's investment in the Company.

(d) Participant has sufficient experience in business, financial and investment matters to be able to evaluate the risks involved in the purchase of the Shares and to make an informed investment decision with respect to such purchase.

(e) Participant can afford a complete loss of the value of the Shares and is able to bear the economic risk of holding such Shares for an indefinite period.

(f) Participant understands that (i) the Shares have not been registered under the Securities Act and are "restricted securities" within the meaning of Rule 144 under the Securities Act, (ii) the Shares cannot be sold, transferred or otherwise disposed of unless they are subsequently registered under the Securities Act or an exemption from registration is then available; (iii) in any event, the exemption from registration under Rule 144 will not be available for at least one year and even then will not be available unless a public market then exists for the Common Stock, adequate information concerning the Company is then available to the public, and other terms and conditions of Rule 144 are complied with; and (iv) there is now no registration statement on file with the Securities and Exchange Commission with respect to any stock of the Company and the Company has no obligation or current intention to register the Shares under the Securities Act.

2. Tax Consultation. Participant understands that Participant may suffer adverse tax consequences as a result of Participant's purchase or disposition of the Shares. Participant represents that Participant has consulted with any tax consultants Participant deems advisable in connection with the purchase or disposition of the Shares and that Participant is not relying on the Company for any tax advice. Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. Participant understands that Participant (and not the Company) shall be responsible for Participant's tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.

3. Restrictive Legends and Stop-Transfer Orders.

(a) Legends. Participant understands and agrees that the Company shall cause any certificates issued evidencing the Shares to have the legends set forth below or legends substantially equivalent thereto, together with any other legends that may be required by state or federal securities laws:

> THE SHARES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED ("ACT"), NOR HAVE THEY BEEN REGISTERED OR QUALIFIED UNDER THE SECURITIES LAWS OF ANY STATE. NO TRANSFER OF SUCH SECURITIES WILL BE PERMITTED UNLESS A REGISTRATION STATEMENT UNDER THE ACT IS IN EFFECT AS TO SUCH TRANSFER, THE TRANSFER IS MADE IN ACCORDANCE WITH RULE 144 UNDER THE ACT, OR IN THE OPINION OF COUNSEL (WHICH MAY BE COUNSEL FOR THE COMPANY) REGISTRATION UNDER THE ACT IS UNNECESSARY IN ORDER FOR SUCH TRANSFER TO COMPLY WITH THE ACT AND WITH APPLICABLE STATE SECURITIES LAWS.
>
> THE SHARES REPRESENTED BY THIS CERTIFICATE MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY. SUCH TRANSFER RESTRICTIONS ARE BINDING ON TRANSFEREES OF THESE SHARES.

(b) Participant agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

4. Notices. Any notice required or permitted hereunder shall be given in accordance with the provisions set forth in Section 4.2 of the Option Agreement.

5. Further Instruments. Participant hereby agrees to execute such further instruments and to take such further action as the Company requests to carry out the purposes and intent of this Agreement and the Plan, including, without limitation, restrictions on the transferability of shares of Common Stock, the right of the Company to repurchase shares of Common Stock, the right of the Company to require that shares of Common Stock be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements in accordance with Section 10.15 of the Plan.

6. Entire Agreement. The Plan and Option Agreement are incorporated herein by reference. This Agreement, the Plan and the Option Agreement constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

ACCEPTED BY: **GENERATE BIOMEDICINES, INC.**	**SUBMITTED BY:** **PARTICIPANT**
By: _____	_____
Name: _____	[Participant Name]
Title: _____	

Generate Biomedicines, Inc.
26 Landsdowne Street, 3rd Floor, Cambridge, MA 02139

March 31, 2022

Jason Silvers
[Omitted]

Dear Jason,

On behalf of Generate Biomedicines, Inc. (the "Company"), a Flagship Pioneering Company, I am delighted to make this conditional offer of employment with the Company. This offer letter (the "Offer Letter") and the accompanying documents and agreements, which are incorporated herein, summarize and set forth important terms about your employment with the Company.

1. Starting Date, Position, and Duties.

a. Your initial position shall be ***Chief Financial Officer*** reporting to Michael Nally. We anticipate that your employment shall start effective **July 18th, 2022** (the actual date you begin to work for the Company, the "Start Date").

b. As a member of our team, we expect you to devote all of your professional and working time and energies to the business and affairs of the Company. Notwithstanding the foregoing, nothing contained herein shall prevent you from managing your personal investments on your own personal time, including the right to make passive investments in the securities of: (i) any entity which you do not control, directly or indirectly, and which does not compete with Company, or (ii) any publicly-held entity, so long as your aggregate direct and indirect interest does not exceed five percent (5%) of the issued and outstanding securities of any class of securities of such publicly-held entity. You shall not engage in other non-Company related business activities (including board memberships) without the Company's prior written consent; notwithstanding the preceding, the Company approves your membership on the boards of the non-profit organizations listed on Schedule A.

As is generally true for Company employees, you shall be employed on an at-will basis, which means that neither you nor the Company are guaranteeing this employment relationship for any specific period of time. Either you or the Company may choose to end the employment relationship at any time, for any reason, with or without notice. The descriptions of benefits and other compensation arrangements set forth herein are meant to be summary in form and may be subject to change. Other than the terms of this Offer Letter, the Company reserves the right to alter, supplement or rescind its employment procedures, benefits or policies (other than the employment at-will policy) at any time in its sole and absolute discretion and without notice.

2. Compensation.

a. Salary. Your initial base pay shall be at a rate of $450,000 on an annualized basis, minus all federal, state and local required payroll deductions, paid in accordance with the Company's normal payroll practices (the "Annual Salary").

b. Sign On Bonus. In addition, you will receive a cash sign on bonus of $75,000. The sign on bonus is taxable, and all federal, state and local required payroll deductions will be withheld. If you resign from the Company for any reason before the first anniversary of your Start Date, other than due to a Change in Control (as defined in the Company's Equity Incentive Plan) or due to Good Reason, you shall be obligated to repay such sign on bonus to the Company. "Good Reason" shall mean the occurrence of any of the following events during your employment with the Company, without your consent: (i) a relocation of your principal place of employment to a location more than twenty-five (25) miles from the current location as of the Effective Date, unless such new location is no further from your then-current residence than the immediately prior location; (ii) any material reduction in your duties, responsibilities or authority, or any material diminution in your title; or (iii) the Company 's breach of any material provision of this Offer Letter or any other Agreement or Plan Document agreed to, or applicable, to your employment with the Company; *provided* that such event shall constitute Good Reason only if: (A) you continue to perform your job duties as set forth in this Agreement and continue to comply with all of the covenants set forth herein and in the attached Employee Non-Solicitation, Confidentiality and Assignment Agreement, and the attached Employee Non-Competition Agreement; (B) you provide the Company written notice of resignation, specifying in reasonable detail the event constituting Good Reason, within ninety (90) days after the initial existence of such event; and (C) the Company fails to cure (if curable) the Good Reason event within thirty (30) days following receipt of such notice. If the Company timely cures the Good Reason event, then your notice of resignation shall be automatically rescinded. If Company does not timely cure the Good Reason event, then the termination date shall be the date immediately following the end of the Company's cure period, and you shall be paid your full compensation through the termination date.

c. Relocation Bonus. In addition, you will receive a cash relocation bonus of $125,000 to help with relocation costs. The relocation bonus is taxable, and all federal, state and local required payroll deductions will be withheld. If you resign from the Company for any reason within eighteen (18) months of your Start Date, other than due to a Change in Control (as defined in the Company's Equity Incentive Plan) or due to Good Reason, you shall be obligated to repay such relocation bonus to the Company. In addition, to the extent that your current employer pays to repatriate you to the United States, you will not be eligible to receive this relocation bonus.

d. Repatriation Bonus. In the event that **(i)** you are accountable for fulfilling obligations for your current home rental from the date you sign this Offer Letter through October 14, 2022 and **(ii)** you provide such payments, then upon reasonable proof of the amount paid, the Company will provide you a repatriation bonus equal to the amount paid, grossed up for federal, state and local taxes calculated based on the tax rate applicable to your regular Company paycheck, within twenty (20) business days of you providing such proof to the Company. This repatriation bonus is taxable, and all federal, state and local required payroll deductions will be withheld. If you resign from the Company before the second anniversary of your Start Date, other than due to a Change in Control (as defined in the Company's Equity Incentive Plan) or due to Good Reason, you shall be obligated to repay any repatriation bonus you received to the Company. In all other circumstances you will not be obligated to repay the repatriation bonus.

e. Annual Performance Bonus. You shall be eligible to receive an annual bonus of up to forty percent (40%) of your Annual Salary (the "Annual Bonus"), payable upon the achievement, as determined by the Board in its sole discretion, of specific milestones to be

mutually agreed in writing. The Annual Bonus shall be paid to you no later than March 15th of the calendar year immediately following the calendar year in which it was earned. You must be employed by the Company at the time that the Annual Bonus is due to be paid in order to be eligible for and have earned the Annual Bonus.

f. Equity; Stock Options. I shall ask the Board to grant you an option or other equivalent instrument (the "Equity Grant") to purchase 1,328,000 shares of common stock of the Company, equal to approximately 1% of the fully-diluted equity of the Company as determined as of the date of the Offer Letter, at a strike price equal to the fair market value of the Company's common stock or equivalent equity incentive units on the date of grant as determined by the Board. Any grant shall be subject to quarterly vesting, over a four-year period beginning on your first date of employment, subject to a one-year cliff (*i.e.*, 25% of the grant shall vest on the first anniversary of the Start Date), provided however that should your employment terminate due to Change in Control or Good Reason during the first 12 months following your Start Date, the Equity Grant shall vest as if you had been employed by the Company through the one year anniversary of the Start Date. In all respects, these options shall be governed by the Company's equity incentive plan and applicable grant agreement then in effect.

g. Benefits. You shall be eligible to participate in the Company's benefit plans to the same extent as, and subject to the same terms, conditions and limitations applicable to, other Company employees of similar rank and tenure. Summaries of each of the Company's benefit plans are available to you. These benefits may be modified, changed or eliminated from time to time at the sole discretion of the Company, and the provision of such benefits does not change your status as an at-will employee. Where a particular benefit is subject to a formal plan (for example, medical insurance or life insurance), eligibility to participate in and receive any particular benefit is governed solely by the applicable plan document.

h. Expense Reimbursement. The Company shall reimburse you for all ordinary and reasonable out-of-pocket business expenses incurred in furtherance of the Company's business in accordance with the Company's policies with respect thereto as in effect from time to time. You must submit any request for reimbursement no later than ninety (90) days following the date that such business expense is incurred. All reimbursements hereunder shall be made or provided in accordance with the requirements of Section 409A ("Section 409A") of the Internal Revenue Code and the rules and regulations thereunder (the "Code") including, where applicable, the requirement that: **(i)** any reimbursement is for expenses incurred during your lifetime (or during a shorter period of time specified in this Offer Letter), **(ii)** the amount of expenses eligible for reimbursement during a calendar year may not affect the expenses eligible for reimbursement in any other calendar year, **(iii)** the reimbursement of an eligible expense shall be made no later than the last day of the calendar year following the year in which the expense is incurred, and **(iv)** the right to reimbursement or in kind benefits is not subject to liquidation or exchange for another benefit.

i. Repayment Terms. To the extent any payment made pursuant to this paragraph 2 is required to be repaid to the Company, you shall make repayment of amounts actually received net of taxes. To the extent you are legally able to recover any income taxes paid you shall repay those taxes to the Company. The Company shall bear the responsibility of recovering any employment taxes.

3. Certification. By signing this Offer Letter, you are certifying to the Company that: **(a)** your employment with the Company does not and shall not require you to breach any agreement entered into by you prior to employment with the Company (*i.e.*, you have not entered into any agreements with previous employers that are in conflict with your obligations to the Company); **(b)** to the extent you are subject to restrictive agreements with any prior employer that may affect your employment with the Company, you have provided us with a copy of any such agreements; **(c)** your employment with the Company does not violate any order, judgment or injunction applicable to you, and you have provided the Company with a copy of any such order, judgment, or injunction; and **(d)** all facts you have presented to the Company are accurate and true, including all statements made to the Company pertaining to your education, training, qualifications, licensing and prior work experience on any job application, resume or *c.v.*, or in any interview. Please understand that the Company does not want you to disclose any confidential information belonging to a previous employer or to incorporate the proprietary information of any previous employer into the Company's proprietary information and expects that you shall abide by any restrictive covenants of and obligations to prior employers.

4. COVID Vaccine. Generate Biomedicines, Inc. has implemented a mandatory COVID-19 vaccination policy, including boosters when eligible for all employees. The Company will provide reasonable accommodations to individuals who are prevented from receiving the vaccine due to a medical reason or a sincerely held religious belief, practice, or observance when required by applicable law unless such accommodations would impose an undue hardship. New employees will be required to be fully vaccinated and show documentation of their fully vaccinated status or receive a Company-approved medical or religious exemption prior to their first day of employment.

5. Required I-9 Documentation. Your employment with the Company is conditioned on your eligibility to work in the United States. For purposes of completing the USCIS I-9 form, you must provide us sufficient documentation to demonstrate your eligibility to work in the United States on or before your first day of employment.

6. Confidentiality and Other Obligations. As part of your employment with the Company, you shall be exposed to, and provided with, valuable confidential and trade secret information concerning the Company and its present and prospective clients. As a result, in order to protect the Company's legitimate business interests, you understand that your employment by the Company creates a relationship of confidence with respect to confidential and proprietary information belonging to the Company and third parties. In light of the foregoing and as a condition of your employment, you must sign and abide by: **(a)** the Company's standard Confidentiality Agreement, **(b)** the Company's standard Noncompetition Agreement (the "Non-Competition Agreement"), and **(c)** the Company's standard Waiver of Review Period (the "Waiver"), copies of which are enclosed. As a Company employee, you shall be expected to abide by Company policies and procedures as may be in effect from time to time. You must sign and return the Confidentiality Agreement, Noncompetition Agreement, and Waiver (if applicable) before beginning your employment with the Company.

7. Section 409A of the Code.

a. Notwithstanding any other provision of this Offer Letter to the contrary, if any amount (including imputed income) to be paid to you pursuant to this Offer Letter as a result of your termination of employment is "deferred compensation" subject to Section 409A of the Code, and if you are a "Specified Employee" (as defined under Section 409A of the Code) as of the date of your termination of employment hereunder, then, to the extent necessary to avoid the imposition of excise taxes or other penalties under Section 409A of the Code, the payment of benefits, if any, scheduled to be paid by the Company to you hereunder during the first 6-month period following the date of a termination of employment hereunder shall not be paid until the date which is the first business day after six (6) months have elapsed since your termination of employment for any reason other than death. Any deferred compensation payments delayed in accordance with the terms of this Section 6.a shall be paid in a lump sum after 6-months have elapsed since your termination of employment. Any other payments shall be made according to the schedule provided for herein.

b. If any of the benefits set forth in this Offer Letter is "deferred compensation" under Section 409A of the Code, any termination of employment triggering payment of such benefits must constitute a "separation from service" under Section 409A of the Code before distribution of such benefits can commence. To the extent that the termination of your employment does not constitute a "separation from service" under Section 409A of the Code (as the result of further services that are reasonably anticipated to be provided by you to the Company at the time your employment terminates), any benefits payable under this Offer Letter that constitute "deferred compensation" under Section 409A of the Code shall be delayed until after the date of a subsequent event constituting a "separation from service" under Section 409A of the Code. For purposes of clarification, this Section 7.b shall not cause any forfeiture of benefits on your part but shall only act as a delay until such time as a "separation from service" occurs.

c. It is intended that each installment of the payments and benefits provided under this Offer Letter shall be treated as a separate "payment" for purposes of Section 409A of the Code. Neither the Company nor you shall have the right to accelerate or defer the delivery of any such payments or benefits except to the extent specifically permitted or required by Section 409A of the Code.

d. This Offer Letter shall be interpreted and at all times administered in a manner that avoids the inclusion of compensation in income under Section 409A of the Code. Any provision inconsistent with Section 409A of the Code shall be read out of the Offer Letter. For purposes of clarification, this Section 7.d shall be a rule of construction and interpretation and nothing in this Section 7.d shall cause a forfeiture of benefits on the part of you. You acknowledge and agree that the Company does not guarantee the tax treatment or tax consequences associated with any payment or benefit arising under this Offer Letter, including but not limited to consequences related to Section 409A of the Code.

8. General. This Offer Letter, together with the Confidentiality Agreement and the Option Agreement and any other agreements specifically referred to herein or enclosed herewith, embodies the entire agreement and understanding between the parties hereto with respect to the subject matter hereof, and supersedes all prior oral or written agreements and understandings relating to the subject matter hereof. The terms and provisions of this Offer Letter may be modified or amended only by written agreement executed by the parties hereto and may be waived (or

consent for the departure there from granted) only by a written document executed by the party entitled to the benefits of such terms or provisions. The Company may assign its rights and obligations hereunder to any person or entity that succeeds to all or substantially all of the Company's business. You may not assign your rights and obligations hereunder without the prior written consent of the Company and any such attempted assignment by you without the prior written consent of the Company shall be void. This Offer Letter and the rights and obligations of the parties hereunder shall be construed in accordance with and governed by the internal law of Massachusetts, without giving effect to the conflict of law principles thereof. By accepting this offer of employment, you agree that any action, demand, claim or counterclaim in connection with any aspect of your employment with the Company, or any separation of employment (whether voluntary or involuntary) from the Company, shall be brought in the courts of Massachusetts or of the United States of America for the District of Massachusetts, and shall be resolved by a judge alone, and you waive and forever renounce your right to a trial before a civil jury.

Because our employment discussions and the terms of your employment are confidential, it is understood that you shall not disclose the fact or terms of such discussions or the terms of your employment with the Company to anyone other than your immediate family and your legal or financial advisor at any time, absent prior written consent from the Company, or as permitted by law.

Please acknowledge acceptance of this employment offer by signing and dating below. Keep one copy for your files and return one executed copy to me.

[Signature Page Follows]

We look forward to having you on the Generate Biomedicines, Inc. team.

Very truly yours,

Generate Biomedicines, Inc.

By: /s/ Michael Nally
Michael Nally
Chief Executive Officer

Accepted and Agreed to:

/s/ Jason Silvers
Jason Silvers

5/1/2022
Date

SCHEDULE A

Exhibit 10.16

LEASE AGREEMENT

BY AND BETWEEN

IQHQ-4 CORPORATE, LLC,
a Delaware limited liability company,

AS LANDLORD,

AND

GENERATE BIOMEDICINES, INC.
a Delaware corporation,

AS TENANT

INNOVATION PARK, 4 CORPORATE DRIVE, ANDOVER, MA

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LEASE AGREEMENT

This Lease Agreement ("**Lease**") is made and entered into as of October 29, 2021, by and between IQHQ-4 CORPORATE, LLC, a Delaware limited liability company ("**Landlord**"), and GENERATE BIOMEDICINES, INC., a Delaware corporation ("**Tenant**").

Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the premises described as: a entirety of the North Building, Pod 1 (the "**Pod 1 Building**") containing approximately 74,537 rentable square feet, all as designated on the plan attached hereto and incorporated herein as **Exhibit "A"** ("**Premises**"), (the Pod 1 Building, together with the South Building containing Pods 3, 4 and 5, collectively the "**Buildings**"), (the Buildings together with the "Common Areas" (defined below) and the land upon which the same are located, and now known as Innovation Park, 4 Corporate Drive, Andover, Massachusetts, together with all other buildings and improvements thereon and thereunder are collectively referred to as the "**Project**") for the Term and upon the terms and conditions hereinafter set forth, and Landlord and Tenant hereby agree as follows:

ARTICLE 1
BASIC LEASE PROVISIONS

A. Term: Approximately five (5) years.

Commencement Date: The earlier of (i) the date Tenant first commences to conduct business in the Premises, or (ii) November 1, 2021.

Expiration Date: The last day of the fifth (5^{th}) Lease Year, unless extended or earlier terminated pursuant to this Lease.

B. Square Footage: 74,537 rentable square feet.

C. Basic Rental:

Lease Year	Annual Basic Rental	Monthly Basic Rental	Monthly Basic Rental Per Rentable Square Foot
1^{st} Lease Year	$3,354,165.00	$279,513.75	$45.00
2^{nd} Lease Year	$3,454,789.95	$287,889.16	$46.35
3^{rd} Lease Year	$3,558,396.38	$296,533.03	$47.74
4^{th} Lease Year	$3,664,984.29	$305,415.36	$49.17
5^{th} Lease Year	$3,775,299.05	$314,608.25	$50.65

D. Lease Year: Shall mean each consecutive twelve (12) month period beginning on the Commencement Date or an anniversary of the Commencement Date, provided, however, that if the Commencement Date does not fall on the first day of a calendar month, then the first Lease Year shall begin on the Commencement Date and end on the last day of the month containing the first anniversary of the Commencement Date, and each succeeding Lease Year shall begin on the day following the expiration of the prior Lease Year.

E. Tenant's Proportionate Share: 34.92% (74,537rsf/213,460rsf), provided, however, Tenant's Proportionate Share of the Direct Costs for the Pod 1 Building and for the Tank Costs is 100%.

F.	**Security Deposit:**	A security deposit of $838,541.25 in the form of a letter of credit shall be due and payable by Tenant to Landlord not later than ten (10) business days following the execution and delivery of this Lease by Tenant and to be held pursuant to the terms and conditions of Section 4 hereof.
G.	**Permitted Use:**	General and administrative office use and, subject to Tenant's receipt of any applicable permits and approvals, research and development and laboratory use; provided, however, that notwithstanding anything to the contrary set forth hereinabove, and as more particularly set forth in the Lease, Tenant shall be responsible for operating and maintaining the Premises pursuant to, and in no event may Tenant's Permitted Use violate, (A) the Rules and Regulations as that term is defined in Section 30(h) of this Lease, (B) all applicable laws, statutes, ordinances, governmental regulations and requirements, (C) all applicable zoning, building codes and the Underlying Documents as that term is defined in Section 3(c)(ii) of this Lease, and (D) the character of the Project as a first-class office and life sciences project.
H.	**Brokers:**	Newmark & Company Real Estate, Inc. and Colliers International
I.	**Parking Passes:**	Tenant shall have the right to use ninety (90) of the parking spaces at the Project, upon the terms and conditions provided in Article 23 hereof.

ARTICLE 2
TERM/PREMISES

The Term of this Lease shall commence on the Commencement Date as set forth in Section 1.A. of the Basic Lease Provisions and shall end on the Expiration Date set forth in Section 1.A. of the Basic Lease Provisions. Tenant acknowledges and agrees that the Premises is vacant and in acceptable delivery condition and Tenant shall have the right to access and occupy the Premises from and after November 1, 2021. Landlord and Tenant hereby stipulate that the Premises contains the number of square feet specified in Section 1.B. of the Basic Lease Provisions, except that the rentable and usable square feet of the Premises and the Project are subject to verification from time to time by Landlord's architect/space planner. Landlord may deliver to Tenant a Commencement Letter in a form substantially similar to that attached hereto as **Exhibit "C"**, which Tenant shall execute and return to Landlord within ten (10) days of receipt thereof. Failure of Tenant to timely execute and deliver the Commencement Letter shall constitute acknowledgment by Tenant that the statements included in such notice are true and correct, without exception.

Tenant shall have the non-exclusive right, as appurtenant to the Premises, to use, in common with the others entitled to such use, the Common Areas as they from time to time exist, subject to the rights, powers and privileges herein reserved to Landlord. The term "Common Areas" as used herein will include all areas and facilities that are provided and designated by Landlord for general non-exclusive use and convenience of Tenant and other tenants at the Property. Common Areas include but are not limited to the pedestrian sidewalks, landscaped areas, loading docks and loading areas, roadways, parking areas and rights of way, common lavatories, boiler room, sprinkler rooms, elevator rooms, mechanical rooms, loading and receiving areas, janitor closets, and pipes, ducts, conduits, wires and appurtenant fixtures and equipment serving exclusively or in common with other parts of the Building. Landlord reserves the right to close temporarily, make alterations or additions to, or change the location of elements of the Property and the Common Areas, provided that, in connection therewith, Landlord shall perform such closures, alterations, additions or changes in a commercially reasonable manner and, in connection therewith, shall use commercially reasonable efforts to minimize any material interference with Tenant's use of and access to the Premises.

ARTICLE 3
RENTAL

(a) Basic Rental. Tenant agrees to pay to Landlord during the Term hereof, at Landlord's office or to such other person or at such other place as directed from time to time by written notice to Tenant from Landlord, the monthly and annual sums as set forth in Section 1.C. of the Basic Lease Provisions, payable in advance on the first (1st) day of each calendar month, without demand, setoff or deduction, and in the event this Lease commences or the date of expiration of this Lease occurs other than on the first (1st) day or last day of a calendar month, the rent for such month shall be prorated. If the Commencement Date is not the first day of a month, Basic Rental for the partial month commencing as of the Commencement Date shall be prorated based upon the actual number of days in such month and shall be due and payable upon the Commencement Date.

(b) Increase in Direct Costs. Tenant shall pay an additional sum for each calendar year equal to the product of the percentage set forth in Section 1.E. of the Basic Lease Provisions as Tenant's Proportionate Share multiplied by the amount of "Direct Costs" (as hereinafter defined) for such year. In the event either the Premises and/or the Project is expanded or reduced, then Tenant's Proportionate Share shall be appropriately adjusted, and as to the calendar year in which such change occurs, Tenant's Proportionate Share for such calendar year shall be determined on the basis of the number of days during that particular calendar year that such Tenant's Proportionate Share was in effect. In the event this Lease shall terminate on any date other than the last day of a calendar year, the additional sum payable hereunder by Tenant during the calendar year in which this Lease terminates shall be prorated on the basis of the relationship which the number of days which have elapsed from the commencement of said calendar year to and including said date on which this Lease terminates bears to three hundred sixty five (365). Any and all amounts due and payable by Tenant pursuant to this Lease (other than Basic Rental) shall be deemed "**Additional Rent**" and Landlord shall be entitled to exercise the same rights and remedies upon default in these payments as Landlord is entitled to exercise with respect to defaults in monthly Basic Rental payments. Basic Rental and Additional Rent may be referred to collectively in this Lease as "**Rent.**" Any and all amounts due and payable by Tenant to Landlord shall be in the form of (i) business checks, (ii) wire transfers, (iii) electronic funds transfers, or(iv) automated clearing house payments. Any other forms of payment are not acceptable to Landlord including, without limitation (1) cash or currency, (2) cashier's checks and money orders, (3) traveler's checks, (4) payments from credit unions or other non-bank financial institutions, (5) multiple payments for one (1) scheduled payment, and (6) third party checks.

(c) Definitions. As used herein the term "**Direct Costs**" shall mean the sum of the following:

(i) "**Tax Costs**", which shall mean any and all real estate taxes and other similar charges on real property or improvements, assessments, water and sewer charges, and all other charges assessed, reassessed or levied upon the Project and appurtenances thereto and the parking or other facilities thereof, or the real property thereunder (collectively the "**Real Property**") or attributable thereto or on the rents, issues, profits or income received or derived therefrom which are assessed, reassessed or levied by the United States, the Commonwealth of Massachusetts**,** or any local government authority or agency or any political subdivision thereof, and shall include Landlord's reasonable legal fees, costs and disbursements incurred in connection with proceedings for reduction of Tax Costs or any part thereof; provided, however, if at any time after the Effective Date the methods of taxation now prevailing shall be altered so that in lieu of or as a supplement to or a substitute for the whole or any part of any Tax Costs, there shall be assessed, reassessed or levied (a) a tax, assessment, reassessment, levy, imposition or charge wholly or partially as a net income, capital or franchise levy or otherwise on the rents, issues, profits or income derived therefrom, or (b) a tax, assessment, reassessment, levy (including but not limited to any municipal, state or federal levy), imposition or charge measured by or based in whole or in part upon the Real Property and imposed upon Landlord, then except to the extent such items are payable by Tenant under Article 6 below, such taxes, assessments, reassessments or levies or the part thereof so measured or based, shall be deemed to be included in the term "**Direct Costs**." Except as set forth above, Taxes shall not include any inheritance, estate, succession, gift, franchise, rental, income or profit tax, capital stock tax, capital levy or excise taxes.

(ii) "**Operating Costs**", which shall mean all costs and expenses incurred by Landlord in connection with the maintenance, operation, replacement, ownership and repair of the Project, the equipment, the intrabuilding cabling and wiring, adjacent walks, malls and landscaped and common areas and the parking structure, areas and facilities of the Project. Operating Costs shall include but not be limited to, salaries, wages, fringe benefits, and employment taxes for all persons who perform duties connected with the operation, maintenance and repair of the Project up to and including the senior property manager of the Project, its equipment, the intrabuilding cabling and wiring and the adjacent walks and landscaped areas, including janitorial, gardening, security, the cost of parking area operation, repair, restoration, and maintenance, operating engineer, elevator, painting, plumbing, electrical, carpentry, heating, ventilation, air conditioning and window washing; hired services; a reasonable allowance for depreciation of the cost of acquiring or the rental expense of personal property used in the maintenance, operation and repair of the Project; costs to open, operate, repair and maintain all amenity spaces available to tenants of the Project (including the fitness facility, café, collaboration area and conference center); accountant's fees incurred in the preparation of rent adjustment statements; legal fees; real estate tax consulting fees; personal property taxes on property used in the maintenance and operation of the Project; payments under any easement, license, operating agreement, declaration, restrictive covenant, or instrument pertaining to the sharing of costs by the Project, including, without limitation, fees, costs, expenses or dues payable pursuant to the terms of any covenants, conditions or restrictions, reciprocal easement agreements affecting the property, any parking licenses, and any agreements with transit agencies affecting the Real Property, or owners' association pertaining to the Project (collectively, "**Underlying Documents**"); costs to provide any shuttle service from time to time available to tenants of the Project (including, if applicable, costs for leasing or rental of vehicles); capital expenditures incurred to effect a reduction in the Operating Costs, and capital expenditures required to comply with applicable Laws first enacted or first interpreted to apply to the Project after the Commencement Date (collectively, the "**Permitted Capital Expenditures**"); provided, however, that capital expenditures included in Operating Costs shall be amortized (with interest at the greater of the then prime rate of interest charged by Bank of America or its successor or Landlord's borrowing rate for the capital expenditure) over its useful life; costs incurred (capital or otherwise) on a regular recurring basis every three (3) or more years for certain maintenance projects (e.g., parking lot slurry coat or replacement of lobby and elevator cab carpeting), costs incurred in order for the Project, or any portion thereof, to apply for, obtain or maintain a certification pursuant to the United States Green Building Council's Leadership in Energy and Environmental Design ("**LEED**") rating system, or other applicable certification agency, in connection with Landlord's sustainability practices for the Project and all costs of maintaining, managing, reporting and commissioning the Project or any part thereof that was designed and/or built to be sustainable and conform with the LEED rating system (or other applicable certification standard), provided, however, such certification costs described in this subclause shall not be included in Operating Costs during the initial Term of this Lease; the cost of all charges for electricity, gas, water and other utilities furnished to the common areas of the Buildings and the Project (including, without limitation, costs incurred in connection with Landlord's supplying of "green" or other renewable energy), and any taxes thereon; the cost of all charges for fire and extended coverage, liability and all other insurance in connection with the Project carried by Landlord; the cost of all building and cleaning supplies and materials; the cost of all charges for cleaning, maintenance and service contracts and other services with independent contractors and administration fees; a property management fee (which fee may be imputed if Landlord has internalized management or otherwise acts as its own property manager, provided that such fee shall not exceed three percent (3%) of gross revenues from the Project) and license, permit and inspection fees relating to the Project and costs of providing to tenants of the Project and their employees first-class amenities (if any) and services (if any) provided that such amenities are available to Tenant; provided, however, that nothing contained herein shall be deemed to require Landlord to provide any such amenities or services. In the event, during any calendar year, the Project is less than ninety-five percent (95%) occupied at all times, Operating Costs shall be adjusted to reflect the Operating Costs of the Project as though ninety-five percent (95%) were occupied at all times, and the increase or decrease in the sums owed hereunder shall be based upon such Operating Costs as so adjusted. The Pod 1 Building is a standalone building and Tenant occupies the entirety of such Pod 1 Building. Landlord is responsible to repair and maintain, as part of Operating Costs, all Building Systems and facilities in the Pod 1 Building pursuant to, and except as provided otherwise in, Article 9 of this Lease and for purposes of Tenant's allocation of Operating Costs relating to the Pod 1 Building, Landlord shall allocate to Tenant and Tenant shall

pay (in the manner and at the times set forth in this Article 3) 100% of the Operating Costs that relate to and benefit only the Pod 1 Building, including, without limitation, costs to repair, maintain and replace all boilers, chillers, air handlers, cooling towers, elevators, the HVAC system and the Generator and UPS System (as hereinafter defined), and shall pay Tenant's Proportionate Share of any of the Operating Costs that benefit all of the buildings of the Project, such as costs to operate and maintain (including utilities and janitorial expenses) of the amenity spaces at the Project available to Tenant, including the fitness facility, café, collaboration area and conference center, snow plowing services and snow removal costs, and the costs for maintenance of all exterior Common Areas. Notwithstanding the foregoing, (i) with respect to any capital repairs or replacements of any Building Systems exclusively serving the Premises, including, without limitation, the HVAC System, Acid Neutralization Tank and Building Generator and UPS System, the costs of such capital repairs or replacements shall be amortized and charged to Tenant in the "Pod 1" Operating Costs pool as if such expenditures were Permitted Capital Expenditures, and (ii) the costs to provide the Shuttle Service for the Project shall be allocated only to the tenants that voluntarily agree to participate and use the Shuttle Service and, if Tenant is the only tenant that elects to participate and use the Shuttle Service, then Tenant shall be responsible to pay 100% of the costs of such Shuttle Service.

(iii) Operating Costs shall not include: (1) utility expenses that are separately metered or check metered or sub-metered for any individual tenant in the Project, and any utility expenses for any individual tenant in the Project where such utilities are separately metered or check metered or sub-metered for the Premises; (2) any expense for which Landlord is reimbursed or required to be reimbursed by a specific tenant by reason of a special agreement or requirement of the occupancy of the Project by such tenant; (3) expenses for services provided by Landlord for the exclusive benefit of a given tenant or tenants which are not provided to all tenants, including Tenant, whether or not Landlord is directly reimbursed by such tenant or tenants; (4) all costs, fees and disbursements relating to activities for the solicitation, negotiation and execution of leases for space in the Project (including but not limited to advertising costs, leasing commissions and attorneys' fees therefor); (5) the costs of alterations to or payment of allowance for, or the decorating or the redecorating of, space in the Project leased to other tenants; (6) except as stated in subparagraph (h) of the definition of Operating Expenses, the costs associated with the operation of the business of the ownership or entity which constitutes "Landlord", including costs of selling, syndicating, financing or mortgaging any of Landlord's interest in the Project; (7) rentals payable under any ground or underlying lease, if any; (8) except as stated in subparagraph (g) of the definition of Operating Expenses, depreciation, interest and principal payments on mortgages and other debt costs, if any; (9) repairs or other work required due to fire or other casualty to the extent of insurance proceeds actually received by Landlord (or for which Landlord would have been reimbursed had Landlord maintained the insurance required to be maintained by Landlord hereunder); (10) capital improvements to the extent not expressly included in the definition of "Operating Expenses"; (11) payments to affiliates of Landlord (excluding property management fees, which are limited as provided in subparagraph (j) of the definition of Operating Expenses) but only to the extent that they exceed market charges; (12) expense for any service provided to other tenants, but not to Tenant, such as janitorial services within the Premises; (13) legal fees and disbursements incurred for collection of tenant accounts or negotiation of leases, or relating to disputes between Landlord and other tenants of the Building or in connection with consenting to assignments or subleases; (14) Taxes; (15) costs of materials, inventory or other property, or of any clerks, attendants or other persons in any commercial concessions operated by Landlord; (16) interest, fines and penalties on late payments or misconduct by Landlord; (17) expenses for repairs, maintenance or replacements for which Landlord is reimbursed from or pursuant to insurance or condemnation proceeds (or for which Landlord would have been reimbursed had Landlord maintained the insurance required to be maintained by Landlord hereunder); (18) damages awarded to a person against Landlord by reason of Landlord's breach of that party's lease, contract or other agreement; (19) Landlord's political or charitable contributions; (20) any costs in connection with the removal, enclosure, or encapsulation of Hazardous Materials at the Building or the Project (except with respect to those costs for which Tenant is otherwise responsible pursuant to the express terms of the Lease), provided, however, that the provisions of this clause shall not preclude the inclusion of costs with respect to materials (whether existing in the Building or the Project as of the date of the lease or subsequently introduced to the Building or the Project) which are not as of the date of the Lease (or as of the date of introduction) deemed to be Hazardous Materials under applicable laws but which are subsequently deemed to be Hazardous Materials

under applicable law; (21) costs incurred solely and directly as the result of the gross negligence of Landlord; and (22) bad debt losses or reserves of any kind.

(d) Determination of Payment.

(i) Landlord shall give Tenant a yearly expense estimate statement (the "**Estimate Statement**") which shall set forth Landlord's reasonable estimate (the "**Estimate**") of what the total amount of Direct Costs for the then-current calendar year shall be and Tenant's Proportionate Share thereof. Landlord shall use reasonable efforts to deliver the Estimate Statement to Tenant at least thirty (30) days prior to commencement of each calendar year during the Term. Tenant shall pay, with its next installment of monthly Basic Rental due, a fraction of the Estimate for the then-current calendar year (reduced by any amounts paid pursuant to the last sentence of this Section 3(d)(i)). Such fraction shall have as its numerator the number of months which have elapsed in such current calendar year to the month of such payment, both months inclusive, and shall have twelve (12) as its denominator. Until a new Estimate Statement is furnished, Tenant shall pay monthly, with the monthly Basic Rental installments, an amount equal to one-twelfth (1/12) of the total Estimate set forth in the previous Estimate Statement delivered by Landlord to Tenant.

(ii) In addition, Landlord shall give to Tenant within one hundred fifty (150) days following the end of each calendar year, a statement (the "**Statement**") which shall state the Direct Costs incurred or accrued for such preceding calendar year, and which shall indicate the amount of Tenant's Proportionate Share thereof. Within thirty (30) days after Tenant's receipt of the Statement, Tenant shall pay the full amount of Tenant's Proportionate Share of Direct Costs such calendar year, less the amounts, if any, paid during such calendar year on an estimated basis. If, however, the Statement indicates that amounts paid by Tenant on an estimated basis are greater than the actual amount of Tenant's Proportionate Share of Direct Costs specified on the Statement, such overpayment shall be credited against Tenant's next installments of estimated payments, except that if such difference is determined after the end of the Term, Landlord shall refund such overpayment to Tenant within thirty (30) days after such determination. The failure of Landlord to timely furnish the Statement for any calendar year shall not prejudice Landlord from enforcing its rights under this Article 3, once such Statement has been delivered; provided, however, that Landlord shall in all events render the Statement in question or any corrections thereto within two (2) years after the end of the calendar year covered by the applicable statement, and provided, further that the foregoing two (2) year period shall expressly not apply to any new or corrected Statement rendered by Landlord to reflect charges or corrections in charges resulting from any late billing or corrected billing by a third party such as the taxing authority or utility provider. Even though the Term has expired and Tenant has vacated the Premises, when the final determination is made of Tenant's Proportionate Share of the Direct Costs for the calendar year in which this Lease terminates, Tenant shall pay to Landlord an amount as calculated pursuant to the provisions of this Section 3(d) within thirty (30) days after Tenant's receipt of the Statement. The provisions of this Section 3(d)(ii) shall survive the expiration or earlier termination of the Term.

(iii) If the Project is a part of a multi-building development, those Direct Costs attributable to such development as a whole (and not attributable solely to any individual building therein) shall be allocated by Landlord to the Project and to the other buildings within such development on an equitable basis.

(e) Audit Right. Within one hundred eighty (180) days after receipt of a Statement by Tenant ("**Review Period**"), if Tenant disputes the amount set forth in the Statement, Tenant's employees or an independent certified public accountant (which accountant is not retained on a contingency fee basis), designated by Tenant, may, after reasonable notice to Landlord ("**Review Notice**") and at reasonable times, inspect Landlord's records at Landlord's offices or at another mutually agreeable location, provided that Tenant is not then in default after expiration of all applicable cure periods and provided further that Tenant and such accountant or representative shall, and each of them shall use their commercially reasonable efforts to cause their respective agents and employees to, maintain all information contained in Landlord's records in strict confidence. Notwithstanding the foregoing, Tenant shall only have the right to review Landlord's records one (1) time during any twelve (12) month period. If after such inspection, but within ninety (90) days after the Review Period, Tenant notifies Landlord in writing ("**Dispute Notice**")

that Tenant still disputes such amounts, a certification as to the proper amount shall be made in accordance with Landlord's standard accounting practices, at Tenant's expense, by an independent certified public accountant selected by Landlord and who is a member of a nationally or regionally recognized accounting firm and not retained on a contingency fee basis. Tenant's failure to deliver the Review Notice within the Review Period or to deliver the Dispute Notice within ninety (90) days after the Review Period shall be deemed to constitute Tenant's approval of such Statement and Tenant, thereafter, waives the right or ability to dispute the amounts set forth in such Statement. If Tenant timely delivers the Review Notice and the Dispute Notice, Landlord shall cooperate in good faith with Tenant and the accountant to show Tenant and the accountant the information upon which the certification is to be based. Notwithstanding the foregoing, if such certification by the accountant proves that the Direct Costs set forth in the Statement were overstated by more than seven percent (7%), then the cost of the accountant and the cost of such certification shall be paid for by Landlord. Promptly following the parties receipt of such certification, the parties shall make such appropriate payments or reimbursements, as the case may be, to each other, as are determined to be owing pursuant to such certification. Tenant agrees that this section shall be the sole method to be used by Tenant to dispute the amount of any Direct Costs payable by Tenant pursuant to the terms of this Lease, and Tenant hereby waives any other rights at law or in equity relating thereto.

ARTICLE 4
SECURITY DEPOSIT

Tenant shall, not later than ten (10) business days following the execution and delivery of this Lease by Tenant, deliver to Landlord, and Tenant shall maintain in effect at all times during the Term (as the same may be extended), as security for the full and faithful performance and observance by Tenant of Tenant's covenants and obligations under this Lease, an unconditional, irrevocable, absolutely "clean" letter of credit in the amount set forth in the Basic Lease Information, and substantially in the form annexed hereto as **Exhibit "E"** or another form reasonably approved by Landlord and otherwise reasonably satisfactory to Landlord and issued by a banking corporation reasonably satisfactory to Landlord and either having its principal place of business or a duly licensed branch or agency in Boston, MA. Such letter of credit shall have an expiration date no earlier than the first anniversary of the date of issuance thereof and shall be automatically renewed from year to year unless terminated by the issuer thereof by notice to Landlord given not less than forty-five (45) days prior to the expiration thereof. Tenant shall, throughout the Term of this Lease, deliver to Landlord, in the event of the termination of any such letter of credit, replacement letters of credit in lieu thereof (each such letter of credit and such extensions or replacements thereof, as the case may be, is hereinafter referred to as a "**Letter of Credit**") no later than 30 days prior to the expiration date of the preceding Letter of Credit. The term of each such Letter of Credit shall be not less than one year and shall be automatically renewable from year to year as aforesaid. Notwithstanding the foregoing, if Landlord shall elect, in its sole discretion, to accept a Letter of Credit which is subject to a final expiration date, Tenant shall deliver a replacement of or amendment to such Letter of Credit no later than thirty (30) days prior to such final expiration date, and the final Letter of Credit delivered to Landlord pursuant to this Article 4 shall have a final expiration date occurring not earlier than sixty (60) days following the expiration date of this Lease. If Tenant shall fail to obtain any replacement of or amendment to a Letter of Credit within any of the applicable time limits set forth in this Section 4(a), such failure shall constitute an Event of Default of Tenant under this Lease without any additional notice or cure period under Article 19 of this Lease applicable thereto. Landlord agrees that, as of the date of this Lease, Pacific Western Bank is approved as an issuer of the Letter of Credit.

(a) In the event Tenant defaults in respect of the full and prompt payment and performance of any of the terms, provisions, covenants and conditions of this Lease beyond notice (the delivery of which shall not be required for purposes of this Section 4(b) if Landlord is prevented or prohibited from delivering the same under applicable law, including, but not limited to, all applicable bankruptcy and insolvency law) and the expiration of any applicable cure periods (except that no notice and cure period shall be required for purposes of this Section 4(b) with respect to any default by Tenant hereunder if, at the time of such default, any of the events set forth in Section 19(e) shall have occurred with or without the acquiescence of Tenant), including, but not limited to, the payment of Basic Rental and Additional Rent, Landlord may, at its election, (but shall not be obligated to) draw down the entire Letter of Credit or any portion thereof and use,

apply or retain the whole or any part of the security represented by the Letter of Credit to the extent required for the payment of: (i) Basic Rental, Additional Rent or any other sum as to which Tenant is in default beyond applicable notice and cure periods, (ii) any sum which Landlord may expend or may be required to expend by reason of Tenant's default in respect of any of the terms, provisions, covenants, and conditions of this Lease, including but not limited to, any reletting costs or expenses (including, without limitation, any free rent, tenant improvement allowance, leasing commissions, attorneys' fees, costs and expenses, and other fees, costs and expenses relating to the reletting of all or any portion of the Premises), (iii) any damages or deficiency in the reletting of the Premises, whether such damages or deficiency accrued before or after summary proceedings or other re-entry by Landlord, or (iv) any damages awarded to Landlord in accordance with the terms and conditions of Article 19 hereof, it being understood that any use of the whole or any part of the security represented by the Letter of Credit shall not constitute a bar or defense to any of Landlord's other remedies under this Lease or any Law, including but not limited to Landlord's right to assert a claim against Tenant under 11 U.S.C. §502(b)(6) or any other provision of Title 11 of the United States Code. To ensure that Landlord may utilize the security represented by the Letter of Credit in the manner, for the purpose, and to the extent provided in this Section 4(b), each Letter of Credit shall provide that the full amount or any portion thereof may be drawn down by Landlord upon the presentation to the issuing bank (or the advising bank, if applicable) of Landlord's draft drawn on the issuing bank without accompanying memoranda or statement of beneficiary. In no event shall the Letter of Credit require Landlord to submit evidence to the issuing (or advising) bank of the truth or accuracy of any such written statement and in no event shall the issuing bank or Tenant have the right to dispute the truth or accuracy of any such statement nor shall the issuing (or advising) bank have the right to review the applicable provisions of the Lease. In no event and under no circumstance shall the draw down on or use of any amounts under the Letter of Credit constitute a basis or defense to the exercise of any other of Landlord's rights and remedies under this Lease or under any Law, including, but not limited to, Landlord's right to assert a claim against Tenant under 11 U.S.C. §502(b)(6) or any other provision of Title 11 of the United States Code.

(b) In the event Tenant defaults in respect of any of the terms, provisions, covenants or conditions of this Lease beyond notice (the delivery of which shall not be required for purposes of this Article 4 if Landlord is prevented or prohibited from delivering the same under applicable law, including, but not limited to, all applicable bankruptcy and insolvency law) and the expiration of any applicable cure periods (except no notice and cure period shall be required for purposes of this Article 4 with respect to any default by Tenant hereunder if, at the time of such default, any of the events set forth in Section 19(e) shall have occurred with or without the acquiescence of Tenant) and Landlord utilizes all or any part of the security represented by the Letter of Credit but does not terminate this Lease as provided in Article 19 hereof, Landlord may, in addition to exercising its rights as provided in paragraph (b) hereof, retain the unapplied and unused balance of the portion of the Letter of Credit drawn down by Landlord (herein called the "**Cash Security**") as security for the faithful performance and observance by Tenant thereafter of the terms, provisions, and conditions of this Lease, and may use, apply, or retain the whole or any part of said Cash Security to the extent required for payment of Basic Rental, Additional Rent or any other sum as to which Tenant is in default (beyond applicable notice and cure periods) or for any sum which Landlord may expend or be required to expend by reason of Tenant's default in respect of any of the terms, covenants, and conditions of this Lease. In the event Landlord uses, applies or retains any portion or all of the security represented by the Letter of Credit, Tenant shall forthwith restore the amount so used, applied or retained (at Landlord's option, either by the deposit with Landlord of cash or the provision of a replacement Letter of Credit) so that at all times the amount of the security represented by the Letter of Credit and the Cash Security (if any) shall be not less than the security required by this Lease, failing which Tenant shall be in default of its obligations under this Article 4 and Landlord shall have the same rights and remedies as for the non-payment of Basic Rental beyond the applicable grace period.

(c) If Tenant shall fully and faithfully comply with all of Tenant's covenants and obligations under this Lease, the Letter of Credit and the Cash Security (if any) shall be returned to Tenant within forty-five (45) days after the date fixed as the end of this Lease and after delivery to Landlord of entire possession of the Premises; provided, however, that in no event shall any such return be construed as an admission by Landlord that Tenant has performed all of its obligations hereunder. In the event of any sale, transfer or leasing of Landlord's interest in the Building whether or not in connection with a sale, transfer or leasing of the Land to a vendee, transferee or lessee, Landlord shall have the right to transfer the Letter of Credit and the Cash Security (if any) to the vendee, transferee or lessee or, in the alternative, to require Tenant to deliver an appropriate amendment to the Letter of Credit naming the new landlord as beneficiary. Tenant shall be responsible to pay any transfer commission and other costs charged by the issuing bank in connection with any such transfer of the Letter of Credit. Upon such transfer of the Letter of Credit and the Cash Security (if any), Landlord shall thereupon be released by Tenant from all liability for the return thereof, and Tenant shall look solely to the new landlord for the return of the same. The provisions of the preceding sentence shall apply to every subsequent sale, transfer or leasing of the Building, and any successor of Landlord may, upon a sale, transfer, leasing or other cessation of the interest of such successors in the Building, whether in whole or in part, transfer the Letter of Credit and the Cash Security (if any) to any vendee, transferee or lessee of the Building (or require Tenant to deliver an amendment to the Letter of Credit as hereinabove set forth) and shall thereupon be relieved of all liability with respect thereto. Except in connection with a permitted assignment of this Lease, Tenant shall not assign or encumber or attempt to assign or encumber the security represented by the Letter of Credit, and neither Landlord nor its successors or assigns shall be bound by any such assignment, encumbrance, attempted assignment or attempted encumbrance. In any event, in the absence of evidence satisfactory to Landlord of an assignment of the right to receive the security represented by the Letter of Credit, Landlord may return the Letter of Credit to the original Tenant regardless of one or more assignments of this Lease.

(d) Neither the Letter of Credit nor any proceeds therefrom or the Cash Security, if any, shall be deemed an advance rent deposit or an advance payment of any other kind, or a measure or limitation of Landlord's damages or constitute a bar or defense to any of the Landlord's other remedies under this Lease or at law or in equity upon Tenant's default.

(e) In addition to and without limitation of Landlord's other rights under this Article 4, if at any time during the Term of the Lease (as the same may be extended), Landlord reasonably determines that the financial condition of the issuer of the then current Letter of Credit is such that Landlord's ability to draw upon the Letter of Credit is, or in the future may be, impaired, restricted, refused or otherwise adversely affected, then Landlord shall have the right, by giving Tenant written notice of such requirement, to (i) immediately draw upon the Letter of Credit and use, apply and retain the same as Cash Security hereunder and (ii) require that Tenant obtain from a new issuer a replacement Letter of Credit, which issuer and replacement Letter of Credit shall both comply in all respects with the requirements of this Article 4. In the event that Tenant shall not have delivered to Landlord a replacement Letter of Credit complying with all of the requirements of this Article 4 within ten (10) Business Days after Tenant's receipt of such notice, Landlord shall have the right (but not the obligation), to exercise Landlord's rights under Section 4(b) above with respect to such failure and to exercise any other rights and remedies under the Lease, at law or in equity with respect to such Event of Default of Tenant. Upon delivery to Landlord of any such replacement Letter of Credit within the time period described in the preceding sentence, Landlord shall return to Tenant the proceeds of the Letter of Credit which had been drawn by Landlord pursuant to the preceding sentence (or any balance thereof to which Tenant is entitled).

(f) As a material inducement to Landlord to enter into this Lease, Tenant hereby acknowledges and agrees that the Letter of Credit and the proceeds thereof (including, without limitation any Cash Security created by the draw-down of all or any portion of the Letter of Credit) and the obligation to make available or pay to Landlord all or a portion thereof in satisfaction of any obligation of Tenant under this Lease, shall be deemed third-party obligations and not the obligation of Tenant hereunder and, accordingly, (A) shall not be subject to any limitation on damages contained in Section 502(b)(6) of Title 11 of the United States Code or any other limitation on damages that may apply under any federal, state or local law, rule or regulation in connection with a bankruptcy, insolvency or other similar proceeding by, against or on behalf of

Tenant, (B) shall not diminish or be offset against any amounts that Landlord would be able to claim against Tenant pursuant to 11 U.S.C. §502(b)(6) as if no Letter of Credit existed, and (C) may be relied on by Landlord in the event of an assignment of this Lease that is not expressly permitted in accordance with the terms of this Lease even if such assignment has been authorized and approved by a court exercising jurisdiction in connection with a bankruptcy, insolvency or other similar proceeding by, against or on behalf of Tenant.

ARTICLE 5
HOLDING OVER

Should Tenant (or any subtenant, assignee or other party occupying the Premises by, through, under, or with the permission of Tenant), without Landlord's written consent, hold over after termination of this Lease, Tenant shall, at Landlord's option, become either a tenant at sufferance or a month-to-month tenant upon each and all of the terms herein provided as may be applicable to such a tenancy and any such holding over shall not constitute an extension of this Lease. During such holding over, Tenant shall pay in advance, monthly, Basic Rental in an amount equal to the greater of (i) 200% of the Basic Rental, calculated at the rate payable under the terms of this Lease immediately prior to the commencement of such holding over, and (ii) the fair market rental value of the Premises, plus in each case all Additional Rent payable under this Lease during such holdover period and measured from the day on which Tenant's hold-over commences and terminating on the day on which Tenant vacates the Premises. Notwithstanding the foregoing, for the first thirty (30) days of any holding over, the reference to 200% of the Basic Rental in clause (i) of this Article 5 shall instead be 150% of the Basic Rental. Nothing contained in this Article 5 shall be construed as consent by Landlord to any holding over of the Premises by Tenant, and Landlord expressly reserves the right to require Tenant to surrender possession of the Premises to Landlord as provided in this Lease upon the expiration or earlier termination of the Term. If Tenant fails to surrender the Premises upon the expiration or termination of this Lease, Tenant agrees to indemnify, defend and hold Landlord harmless from and against all costs, loss, expense or liability, including without limitation, claims made by any succeeding tenant and real estate brokers claims and attorney's fees and costs, provided, however, that Tenant will not be liable for consequential damages suffered by Landlord on account of Tenant's holding over in the Premises unless such holding over continues for more than thirty (30) days.

ARTICLE 6
OTHER TAXES

Tenant shall pay, prior to delinquency, all taxes assessed against or levied upon trade fixtures, furnishings, equipment and all other personal property of Tenant located in the Premises. In the event any or all of Tenant's trade fixtures, furnishings, equipment and other personal property shall be assessed and taxed with property of Landlord, or if the cost or value of any leasehold improvements in the Premises exceeds the cost or value of a building standard buildout and, as a result, real property taxes for the Project are increased by the taxing authority on account of such above-building standard buildout and Landlord provides reasonable documentation of such increase attributable to Tenant's build out, Tenant shall pay to Landlord, within thirty (30) days after delivery to Tenant by Landlord of a written statement setting forth such amount, the amount of such taxes applicable to Tenant's property or above-standard improvements. Tenant shall assume and pay to Landlord at the time Basic Rental next becomes due (or if assessed after the expiration of the Term, then within thirty (30) days), any excise, sales, use, rent, occupancy, garage, parking, gross receipts or other taxes (other than net income taxes) which may be assessed against or levied upon Landlord on account of the letting of the Premises or the payment of Basic Rental or any other sums due or payable hereunder, and which Landlord may be required to pay or collect under any law now in effect or hereafter enacted. In addition to Tenant's obligation pursuant to the immediately preceding sentence, Tenant shall pay directly to the party or entity entitled thereto all business license fees, gross receipts taxes and similar taxes and impositions which may from time to time be assessed against or levied upon Tenant, as and when the same become due and before delinquency. Notwithstanding anything to the contrary contained herein, any sums payable by Tenant under this Article 6 shall not be included in the computation of "Tax Costs."

ARTICLE 7
USE

(a) Use. Tenant shall use and occupy the Premises only for the Permitted Use set forth in Section 1.G. of the Basic Lease Provisions and shall not use or occupy the Premises or permit the same to be used or occupied for any other purpose without the prior written consent of Landlord, which consent may be given or withheld in Landlord's sole and absolute discretion, and Tenant agrees that it will use the Premises in such a manner so as not to interfere with or infringe upon the rights of other tenants or occupants in the Project. Landlord shall reasonably cooperate with Tenant, in such manner as Tenant may reasonably request, in assisting Tenant to obtain any governmental permits or approvals necessary to enable Tenant to use the Premises for any Permitted Use, provided that Landlord shall not be obligated to incur any out-of-pocket costs or expenses, incur any liability or agree to any restriction on uses or any change in the zoning for any portion of the Project in connection with any such request. Tenant shall, at its sole cost and expense, promptly comply with all laws, statutes, ordinances, governmental regulations or requirements (including, without limitation all Environmental Laws as defined in Section 28(e) below and any accessibility or sustainability laws or requirements) now in force or which may hereafter be in force (collectively, "**Laws**") relating to or affecting (i) Tenant's particular use or occupancy of the Premises, and (ii) improvements, trade fixtures and equipment installed or constructed in the Premises by or for the benefit of Tenant. Tenant hereby agrees and acknowledges that the manufacture, cultivation, sale, use, trade or possession of any drugs or other substance in violation of the laws of the United States of America in the Premises shall be a material breach of this Lease (without any applicable notice and cure period) notwithstanding that any laws of the Commonwealth of Massachusetts permit the manufacture, cultivation, sale, use, trade or possession of such drugs or other substances for recreational or medicinal purposes, including without limitation, cannabis, cannabinoids or any derivations thereof. Tenant shall not permit more than six (6) people per one thousand (1,000) rentable square feet of the Premises to occupy the Premises at any time. Tenant shall comply with, and Tenant's rights and obligations under this Lease and Tenant's use of the Premises shall be subject and subordinate to, all recorded easements, covenants, conditions, restrictions and other Underlying Documents now or hereafter affecting the Project. Tenant shall not do or permit to be done anything which would invalidate or increase the cost of any insurance policy covering the Project and/or the property located therein and Tenant shall comply with all rules, orders, regulations and requirements of any organization which sets out standards, requirements or recommendations commonly referred to by major fire insurance underwriters, and Tenant shall promptly within thirty (30) days after Tenant's receipt of an invoice therefor reimburse Landlord for any additional premium charges for any such insurance policy assessed or increased by reason of Tenant's use of the Premises or failure to comply with the provisions of this Article 7. Tenant shall comply with Landlord's reasonable sustainability practices applicable to the Project and shall not permit any use of the Premises which may affect the continued certification of the Project issued pursuant to the United States Green Building Council's Leadership in Energy and Environmental Design ("**LEED**") rating system (or other applicable certification standard). Landlord represents that the Building is zoned for laboratory for research and development work.

(b) Odors and Ventilation. Tenant shall not cause or permit (or conduct any activities that would cause) any release of any odors or fumes of any kind from the Premises. If the Project has a ventilation system that, in Landlord's judgment, is adequate, suitable, and appropriate to vent the Premises in a manner that does not release odors affecting any indoor or outdoor part of the Real Property, Tenant shall vent the Premises through such system. If Landlord at any time determines that any existing ventilation system is inadequate, or if no ventilation system exists, Tenant shall in compliance with applicable laws vent all fumes and odors from the Premises (and remove odors from Tenant's exhaust stream) as Landlord requires. The placement and configuration of all ventilation exhaust pipes, louvers and other equipment shall be subject to Landlord's prior written approval. Tenant acknowledges Landlord's legitimate desire to maintain the Project (indoor and outdoor areas) in an odor-free manner, and Landlord may require Tenant to abate and remove all odors in a manner that goes beyond the requirements of applicable laws. Tenant shall, at Tenant's sole cost and expense, provide odor eliminators and other devices (such as filters, air cleaners, scrubbers and whatever other equipment may in Landlord's reasonable judgment be necessary or appropriate from time to time) as required to remove, eliminate and abate any odors, fumes or other substances in Tenant's exhaust stream. If Tenant fails to install

satisfactory odor control equipment within ten (10) business days after Landlord's demand made at any time, then Landlord may, without limiting Landlord's other rights and remedies, require Tenant to cease and suspend any operations in the Premises that, in Landlord's reasonable determination, causes odors, fumes or exhaust or Landlord may take such measures as Landlord deems necessary to abate such odors, fumes or exhaust, and Tenant shall pay all costs incurred by Landlord in connection with such remedial measures, plus a reasonable administrative fee, upon demand as Additional Rent.

(c) Transportation Programs. Tenant shall fully comply with all present or future programs intended to manage parking, transportation or traffic in and around the Project, and in connection therewith, Tenant shall take responsible action for the transportation planning and management of all employees located at the Premises by working directly with Landlord, any governmental transportation management organization or any other transportation-related committees or entities. Such programs may include, without limitation: (i) restrictions on the number of peak-hour vehicle trips generated by Tenant; (ii) increased vehicle occupancy; (iii) implementation of an in-house ridesharing program and an employee transportation coordinator; (iv) working with employees and any Project or area-wide ridesharing program manager; (v) instituting employer-sponsored incentives (financial or in-kind) to encourage employees to rideshare; and (vi) utilizing flexible work shifts for employees.

(d) Chemical Safety Program. Tenant shall establish and maintain a chemical safety program administered by a licensed, qualified individual in accordance with the requirements of the Greater Lawrence Sanitary District ("**GLSD**") and any other applicable governmental authority. Tenant shall be solely responsible for all costs incurred in connection with such chemical safety program, and Tenant shall provide Landlord with such documentation as Landlord may reasonably require evidencing Tenant's compliance with the requirements of (a) the GLSD and any other applicable governmental authority with respect to such chemical safety program and (b) this Section 7(d). Notwithstanding the foregoing, Landlord shall obtain and maintain during the Term any permit required by the GLSD ("**GLSD Permit**") for the installation and operation of the Acid Neutralization Tank (as defined below). Tenant shall not introduce anything into the Acid Neutralization Tank (x) in violation of the terms of the GLSD Permit, (y) in violation of applicable laws or (z) that would interfere with the proper functioning of the Acid Neutralization Tank. Tenant agrees to reasonably cooperate with Landlord in order to obtain the GLSD Permit and the wastewater treatment operator license. Tenant shall reimburse Landlord within thirty (30) days after Tenant's receipt of an invoice therefor for any costs incurred by Landlord pursuant to this Section 7(d). Tenant shall indemnify, save, defend (at Landlord's option and with counsel reasonably acceptable to Landlord) and hold Landlord, its lenders, partners, subpartners and their respective officers, agents, servants, employees, and independent contractors (the "**Landlord Parties**") harmless from and against any and all Claims arising out of Tenant's use of the Acid Neutralization Tank, including (a) damages for the loss or restriction on use of rentable or usable space or of any amenity of the Project, (b) damages arising from any adverse impact on marketing of space in the Project or any portion thereof and (c) sums paid in settlement of claims that arise during or after the Term as a result of Tenant's improper use of the Acid Neutralization Tank. This indemnification by Tenant (x) includes costs incurred in connection with any investigation of site conditions or any clean-up, remediation, removal or restoration required by any governmental authority caused by Tenant's improper use of the Acid Neutralization Tank, and (z) subject to the waiver of subrogation set forth in Section 14(d), excludes Claims to the extent caused by the negligence or willful misconduct of Landlord.

ARTICLE 8
CONDITION OF PREMISES

Tenant hereby agrees that, subject to the performance of the tenant improvements, to be performed after the Commencement Date, as provided in the Work Letter attached hereto as **Exhibit "D"** and made a part hereof (the "**Tenant Improvements**"), the Premises shall be taken "as is", "with all faults", "without any representations or warranties", and Tenant does hereby waive and disclaim any objection to, cause of action based upon, or claim that its obligations hereunder should be reduced or limited because of the condition of the Premises or the Project or the suitability of same for Tenant's purposes. Notwithstanding the foregoing or anything to the contrary contained herein, Landlord shall deliver the Premises to Tenant with the Building

Systems, the HVAC System and the Acid Neutralization Tank in good working order and condition. Tenant acknowledges that neither Landlord nor any agent nor any employee of Landlord has made any representations or warranty with respect to the Premises or the Project or with respect to the suitability of either for the conduct of Tenant's business. Nothing contained herein is intended to, nor shall, obligate Landlord to implement sustainability practices for the Project or to seek certification under, or make modifications in order to obtain, a certification from LEED or any other comparable certification. The existing leasehold improvements in the Premises as of the Effective Date and any Tenant Improvements, may be collectively referred to herein as the "**Improvements**" The taking of possession of the Premises by Tenant shall conclusively establish that the Premises and the Project were at such time in satisfactory condition.

Provided Tenant delivers to Landlord fully detailed and dimensioned plans and specifications for the Tenant Improvements (in accordance with the requirements for Alterations pursuant to Section 9(c) of this Lease) (the "**Final Plans**") and which are approved by Landlord in accordance with **Exhibit "D"** attached hereto, Landlord shall construct and install the Tenant Improvements at Tenant's cost and expense, subject to the Improvement Allowance (as defined in the Work Letter). Tenant acknowledges and agrees that construction of the Tenant Improvements by Landlord will occur after the Commencement Date and during Tenant's occupancy of all or portions of the Premises, and the performance of the Tenant Improvements is not a condition to the Commencement Date. Tenant and Tenant's employees, agents, contractors, consultants, workmen, mechanics, suppliers and invitees shall reasonably cooperate, work in harmony and not, in any manner, interfere with Landlord or Landlord's agents or representatives in constructing and installing the Tenant Improvements. Such construction and installation of the Tenant Improvements may result in noise, disturbances or inconveniences and Tenant has agreed to accept possession of the Premises and to perform its obligations under this Lease prior to the performance of the Tenant Improvements. Landlord's performance of the Tenant Improvements after the Commencement Date shall not render Landlord liable in any respect for damages to either person or property, nor be construed as an eviction of Tenant, nor cause or result in any basis for a claim to an abatement of rent, nor relieve Tenant from fulfillment of any covenant or agreement under this Lease.

ARTICLE 9
REPAIRS AND ALTERATIONS

(a) Landlord's Obligations.

(i) Landlord shall maintain and keep in good working order and condition: the structural portions of the Project, including the foundation, floor/ceiling slabs, roof, curtain wall, exterior glass, columns, beams, shafts, stairs, stairwells, elevator cabs and Common Areas, and shall also maintain and repair the basic mechanical, electrical, life safety, plumbing, sprinkler systems and heating, ventilating and air-conditioning systems serving the Premises (the "**Building Systems**"), provided, however, that Landlord's obligation with respect to any such Building Systems shall be to repair and maintain those portions of the systems located in the core of the Project or in other areas outside of the Premises, but Tenant shall be responsible to repair and maintain any distribution of such systems throughout the Premises[1]. All costs incurred by Landlord under this Section 9(a)(i) shall be included in Operating Costs, subject to, and in accordance with Article 3.

(ii) Landlord shall, as an Operating Cost allocable 100% to the Pod 1 Building and payable 100% by Tenant, repair and maintain (including necessary replacements thereto) the HVAC System (as hereinafter defined) and in connection therewith, Landlord shall retain a service and maintenance contract for the HVAC System with a contractor designated by Landlord. Tenant shall pay the cost of the service and maintenance contract for the HVAC System in the Premises, as well as for costs of repair and replacement thereof as necessary in the reasonable judgment of Landlord, as Additional Rent, within thirty (30) days of receipt of billings therefor from Landlord.

[1] Distribution elements does remain a Tenant responsibility. Tenant can request Landlord perform via a work order submission process.

(iii) Landlord shall, as an Operating Cost allocable 100% to the Pod 1 Building and payable 100% by Tenant, repair and maintain (including necessary replacements thereto) the Building Generator and UPS System (as hereinafter defined) and any Existing Supplemental Units (as hereinafter defined).

(iv) Landlord shall, as an Operating Cost allocable 100% to the Pod 1 Building and payable 100% by Tenant, repair and maintain (including necessary replacements thereto) the Acid Neutralization Tank (as hereinafter defined) and in connection therewith, Landlord shall retain a service and maintenance contract for the Acid Neutralization Tank in accordance with the manufacturer's standard maintenance guidelines.

(v) Notwithstanding anything to the contrary set forth in Section 3(c)(iii) of this Lease, with respect to any capital repairs or replacements incurred by Landlord pursuant to subsections (ii), (iii) and (iii), the costs of such capital repairs or replacements shall be amortized and charged to Tenant in the "Pod 1" Operating Costs pool as if such expenditures were Permitted Capital Expenditures.

(b) Tenant's Obligations. Except as expressly provided as Landlord's obligation in this Article 9, and in addition to Tenant's obligations in Article 11 below, Tenant shall keep the Premises in good condition and repair and in compliance with Landlord's sustainability practices, including, without limitation, compliance with any LEED rating system (or other certification standard), applicable to the Project.

(i) Tenant's obligations shall include, without limitation, maintenance and repair of all specialized systems installed by Tenant to serve the Premises such as deionized water systems, water purification, compressed gas distribution, vacuum pumps and air compressors and associated fume hoods and other equipment (collectively, "**Specialized Systems**"). Specialized Systems shall include any Supplemental Units (as hereinafter defined) installed by Tenant, any Tenant installed backup generator and all laboratory equipment and systems serving the Premises (whether existing as of the Commencement Date or thereafter installed by Tenant), including, but not limited to, chemistry fume hoods, water purification systems, vacuum, compressed air (non-lab grade), liquid nitrogen and carbon dioxide systems. All Specialized Systems shall be maintained, repaired and replaced by Tenant (i) in a commercially reasonable condition consistent with prevailing industry practices, (ii) in accordance with any applicable manufacturer specifications relating to any particular component of such Specialized Systems, (iii) in accordance with applicable laws, statutes, ordinances, governmental regulations or requirements now in force or which may hereafter be in force. Tenant shall contract with qualified, experienced professional third-party service companies (collectively, "**Service Contracts**") which will provide for routine maintenance of the Specialized Systems on an at least quarterly basis. Tenant shall regularly, in accordance with commercially reasonable standards, generate and maintain preventive maintenance records relating to each Specialized System (collectively, "**Preventative Maintenance Records**"). Upon Landlord's request, Tenant shall deliver a copy of all current Service Contracts to Landlord and/or a copy of the Preventative Maintenance Records.

(ii) All damage or injury to the Premises or the Project resulting from the act or negligence of Tenant, its employees, agents or visitors, guests, invitees or licensees or by the use of the Premises, shall be promptly repaired by Tenant at its sole cost and expense, to the reasonable satisfaction of Landlord; provided, however, that for damage to the Project as a result of casualty or for any repairs that may impact the mechanical, electrical, plumbing, heating, ventilation or air-conditioning systems of the Project, Landlord shall have the right (but not the obligation) to select the contractor and oversee all such repairs. Landlord may make any repairs which are not promptly made by Tenant after Tenant's receipt of written notice and the reasonable opportunity of Tenant to make said repair within thirty (30) business days from receipt of said written notice, and charge Tenant for the cost thereof, which cost shall be paid by Tenant within thirty (30) days from invoice from Landlord. Tenant shall be responsible for the design and function of all non-standard improvements of the Premises, whether or not installed by Landlord at Tenant's request. Tenant waives all rights to make repairs at the expense of Landlord, or to deduct the cost thereof from the rent.

(c) Alterations. Tenant shall make no alterations, installations, changes or additions in or to the Premises or the Project (collectively, "**Alterations**") without Landlord's prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed; provided, however, that it shall be deemed reasonable for Landlord to withhold its consent to any Alteration which conflicts with the construction rules and regulations, or adversely affects the structural portions of the Premises, the Building or the Project, or adversely affects the Building Systems or any portion thereof. Without limitation as to other grounds for Landlord withholding its consent to any proposed Alteration, Landlord may withhold its consent to a proposed Alteration if Landlord determines that such Alteration is not compatible with any existing or planned future certification of the Project under the LEED rating system (or other applicable certification standard). Any Alterations approved by Landlord must be performed in accordance with the terms hereof, using only contractors or mechanics reasonably approved by Landlord in writing and upon the approval by Landlord in writing of fully detailed and dimensioned plans and specifications pertaining to the Alterations in question, to be prepared and submitted by Tenant at its sole cost and expense. Tenant shall at its sole cost and expense obtain all necessary approvals and permits pertaining to any Alterations approved by Landlord. Tenant shall cause all Alterations to be performed in a good and workmanlike manner, in conformance with all Laws, pursuant to a valid building permit, and in conformance with Landlord's construction rules and regulations. All Alterations shall be performed in accordance with the Tenant Sustainable Design & Construction Guidelines attached hereto as **Exhibit "H"** and incorporated herein. If Landlord, in approving any Alterations, specifies a commencement date therefor, Tenant shall not commence any work with respect to such Alterations prior to such date. Tenant hereby agrees to indemnify, defend, and hold Landlord free and harmless from all liens and claims of lien, and all other liability, claims and demands arising out of any work done or material supplied to the Premises by or at the request of Tenant in connection with any Alterations, except to the extent caused by the negligence or willful misconduct of Landlord.

The foregoing notwithstanding, Tenant shall have the right to perform, without Landlord's consent, non-structural Alterations to the Premises which (1) do not affect any area of the Building outside of the Premises, (2) are not visible from the exterior of the Premises, (3) do not affect or involve the Building Systems, and (4) do not require the issuance of a building permit and cost Five Hundred Thousand and 00/100 Dollars ($500,000.00) or less on a completed project basis ("**Cosmetic Alterations**"), provided Tenant shall deliver at least five (5) days' prior written notice thereof to Landlord describing the work to be performed and such work is performed subject to and in accordance with this Article 9 in all other respects.

Any wiring and cabling installed by or on behalf of Tenant or any of the Tenant Parties, must be marked and coded in a manner reasonably acceptable to Landlord to identify such facilities as belonging to Tenant and the point of commencement and termination of such facilities and the purpose of such lines (i) every six (6) feet outside the Premises (including the electrical room risers and any Common Areas), and (ii) at their termination points. Unless otherwise notified by Landlord, Tenant, at its expense and before the expiration or earlier termination hereof, shall remove all such wiring and cabling installed in the Premises or the Common Areas by or for Tenant or any of the Tenant Parties and repair any resulting damage.

(d) Insurance; Liens. Prior to the commencement of any Alterations, Tenant shall provide Landlord with evidence that Tenant carries "Builder's All Risk" insurance in an amount approved by Landlord covering the construction of such Alterations, and such other insurance as Landlord may reasonably require, it being understood that all such Alterations shall be insured by Tenant pursuant to Article 14 of this Lease immediately upon completion thereof. In addition, with respect to any Alteration, the cost of which exceeds Two Hundred Thousand and 00/100 Dollars ($200,000.00), Landlord may, in its discretion, require Tenant to obtain a bond or some alternate form of security satisfactory to Landlord in an amount sufficient to ensure the lien free completion of such Alterations.

(e) Costs and Fees; Removal. If Alterations are made, they shall be made at Tenant's sole cost and expense and shall be and become the property of Landlord, except that Landlord may, by written notice to Tenant given at the time Landlord provides its consent to such Alterations, require Tenant, at Tenant's expense, to remove any or all partitions, counters, movable benches, railings, systems, and any of Improvements and other Alterations from the Premises

installed by Tenant or any of the Tenant Parties and which Landlord reasonably determines constitutes a Specialty Improvement (as hereinafter defined), and to repair any damage to the Premises and the Building caused by the installation or removal of such Specialty Improvement. Any and all costs attributable to or related to the applicable building codes of the city in which the Project is located (or any other authority having jurisdiction over the Project) arising from Tenant's plans, specifications, improvements, Alterations or otherwise shall be paid by Tenant at its sole cost and expense. With regard to repairs, Alterations or any other work arising from or related to this Article 9 which Landlord performs on Tenant's behalf, Landlord shall be entitled to receive an administrative/coordination fee in the amount of 3% of the cost of such work. As used herein, a "**Specialty Improvement**" is any Improvement, Alteration or installation that is not a normal, customary and reusable improvement by tenants in Comparable Buildings using a premises for general office and life science use and that would be materially more expensive to remove from the Premises than typical general office and life sciences improvements, the parties agreeing that the following Improvements and Alterations shall be deemed Specialty Improvements: private restrooms installed by Tenant after the Commencement Date, raised flooring system, vaults or other similar device(s) or system(s) intended to secure the Premises or a portion thereof in a manner that exceeds the level of security normally found in premises occupied for general office and life science uses, and Tenant's exterior signage.

(f) Security System. Tenant shall be entitled to install, at Tenant's sole cost and expense, a separate security system for the Premises as an Alteration or as a part of the Improvements; provided, however, that the plans and specifications for any such system shall be subject to Landlord's reasonable approval, and any such system must be compatible with the existing systems of the Project, Tenant's obligation to indemnify, defend and hold Landlord harmless as provided in, and subject to, Section 13(a) below shall also apply to Tenant's use and operation of any such system, and the installation of such system shall otherwise be subject to the terms and conditions of this Article 9. At Landlord's option, upon the expiration or earlier termination of this Lease, Tenant shall remove such security system and repair any damage to the Premises resulting from such removal. Tenant shall at all times provide Landlord with a contact person who can disarm the security system and who is familiar with the functions of the system in the event of a malfunction, and Tenant shall provide Landlord with the codes or other necessary information required to disarm the system in the event Landlord must enter the Premises in accordance with Section 12(a).

(g) Supplemental HVAC Units. Tenant shall be entitled to install, as an Alteration, dedicated heating, ventilation and air conditioning units ("**Tenant Supplemental Units**") within the Premises at Tenant's sole cost and expense. The plans and specifications for any Tenant Supplemental Units shall, as indicated in the Work Letter, be subject to Landlord's reasonable approval. If Tenant elects to install Supplemental Units within the Premises, Tenant shall also install, at Tenant's sole cost and expense, submeters, in order to measure the amount of electricity furnished to such units and Tenant shall be responsible for Landlord's actual cost of supplying electricity to such units as reflected by such submeters, which amounts shall be payable on a monthly basis as Additional Rent. Tenant shall be solely responsible for maintenance and repair of any Tenant Supplemental Units and such units shall, at Landlord's option, be considered to be a fixture within the Premises and shall remain upon the Premises upon the expiration or earlier termination of the Term. Tenant may use any existing Supplemental Units in or serving the Premises as of the Commencement Date ("**Existing Supplemental Units**") and shall be responsible, at Tenant's sole cost and expense, to repair and maintain (including necessary replacements) such existing Supplemental Units in good working order and condition. Landlord expressly disclaims any warranties with regard to any Existing Supplemental Units or the installation thereof, including any warranty of merchantability or fitness for a particular purpose, and Tenant shall be responsible for determining if any Existing Supplemental Units are sufficient for Tenant's operations at the Premises.

(h) Backup Generator. In addition to the Building Generator and UPS System (as hereinafter defined), Landlord shall permit Tenant to install and maintain, at Tenant's sole cost and expense, up to a 500 kW, backup diesel or natural gas powered emergency generator[2] at a location designated by Landlord, subject to compliance with all applicable Laws and Landlord's prior written approval of all plans and specifications, which approval shall not be unreasonably withheld, and Tenant's receipt of any applicable governmental permits and approvals. Tenant shall submit the specifications for design, operation, installation and maintenance of the backup generator for Landlord's consent, which consent shall not be unreasonably withheld or delayed and may be conditioned on Tenant complying with such reasonable requirements imposed by Landlord, based on the advice of Landlord's structural and mechanical engineers, so that the Project's systems and equipment are not adversely affected. Landlord shall have no obligation to provide any services including, without limitation, electric current or gas service, to the backup generator, provided, however, subject to applicable Laws and Landlord's prior written approval of plans and specifications therefor, Tenant may also install, maintain and operate necessary utility connections between the backup generator and the Premises (which utility connections shall be deemed part of the backup generator facilities). Tenant shall connect the backup generator and the Building Generator and UPS System to the electrical submeter(s) serving the Premises and pay for the electricity supplied to such systems and equipment in accordance with Section 11(a)(ii) below. Landlord may, in its sole and absolute discretion, require Tenant, at Landlord's cost, to relocate any or all of the backup generator to a location with comparable functionality, which relocation shall be performed by Tenant within a reasonable period following such request (taking into account any reasonable time necessary to obtain permits and approvals for such work, Tenant hereby agreeing to use diligent good faith efforts to obtain the same and to promptly commence and prosecute to completion such relocation thereafter). The vent for the backup generator must be higher than the roof line of the Project. Tenant shall be responsible for the cost of repairing and maintaining the backup generator in good order, condition and repair and in compliance with applicable Laws and for the cost of repairing any damage to the Building, or the cost of any necessary improvements to the Building, caused by or as a result of the installation, replacement and/or removal of the backup generator. Landlord makes no warranties or representations to Tenant as to the suitability of the designated generator location for the installation and operation of the backup generator. If Tenant is so notified by Landlord at the time of Landlord's approval of the specifications for the backup generator, Tenant shall, at Tenant's sole cost and expense, remove such Tenant installed generator (but not the Building Generator and UPS Systems) upon the expiration or earlier termination of the Term and repair all damage to the Project resulting from such removal. Any Tenant installed backup generator and all associated facilities shall be deemed to be a part of the Premises for purposes of Article 14 of this Lease.

The Building Generator and any Tenant installed backup generator may be referred to herein collectively as the "**Tenant Generators**." The Tenant Generators shall be used by Tenant only during (i) testing and regular maintenance, and (ii) any period of electrical power outage in the Project. Tenant shall be entitled to operate the Tenant Generators for testing and regular maintenance only upon notice to Landlord and at times reasonably approved by Landlord. Further, Tenant shall be responsible for ensuring that Tenant's use and operation of the Tenant Generators does not interfere with the use of the Project by other tenants.

(i) Access. Subject to events attributable to Force Majeure, Landlord's security requirements, repairs made by Landlord to the Project and Articles 16 and 18 below, Tenant shall have access to the Premises twenty-four (24) hours per day, seven (7) days per week throughout the Lease Term.

ARTICLE 10
LIENS

Tenant shall keep the Premises and the Project free from any mechanics' liens, vendors liens or any other liens arising out of any work performed, materials furnished or obligations incurred by Tenant, and Tenant agrees to defend, indemnify and hold Landlord harmless from and against any such lien or claim or action thereon, together with costs of suit and reasonable attorneys' fees and costs incurred by Landlord in connection with any such claim or action. Before

[2] Propane is not permitted.

commencing any Alteration, Tenant shall give Landlord at least ten (10) business days' written notice of the proposed commencement of such work (to afford Landlord an opportunity to post appropriate notices of non-responsibility). In the event that there shall be recorded against the Premises or the Project or the property of which the Premises is a part any claim or lien arising out of any such work performed, materials furnished or obligations incurred by Tenant and such claim or lien shall not be removed or discharged within ten (10) business days of filing, Landlord shall have the right but not the obligation to pay and discharge said lien without regard to whether such lien shall be lawful or correct (in which case Tenant shall reimburse Landlord for any such payment made by Landlord within thirty (30) days following written demand), or to require that Tenant promptly deposit with Landlord in cash, lawful money of the United States, one hundred fifty percent (150%) of the amount of such claim, which sum may be retained by Landlord until such claim shall have been removed of record or until judgment shall have been rendered on such claim and such judgment shall have become final, at which time Landlord shall have the right to apply such deposit in discharge of the judgment on said claim and any costs, including reasonable attorneys' fees and costs incurred by Landlord, and shall remit the balance thereof to Tenant.

ARTICLE 11
PROJECT SERVICES

(a) Basic Services. Landlord agrees to furnish to the Premises and the Project, at a cost to be included in Operating Costs:

(i) Landlord provides HVAC service only to the Common Areas of the other buildings at the Project daily from 8:00 a.m. to 6:00 p.m. Monday through Friday and 8:00 a.m. to 1:00 p.m. on Saturday ("**Normal Business Hours**"); provided, however, Tenant shall only be responsible for paying Tenant's Proportionate Share of any Operating Costs in connection with the provision of HVAC service to the amenity spaces at the Project Available to Tenant. A separate heating ventilation and air-conditioning system ("**HVAC System**") exclusively serves the Premises and Landlord shall be responsible, at Tenant's sole cost and expense, for providing all heat and air-conditioning to the areas of the Premises serviced by such HVAC System. Alternatively, Landlord may, at its option, elect to have the HVAC System in the Premises maintained, repaired and replaced in common with other equipment in the Project. In such event, within ten (10) days after receipt of billings therefor and as Additional Rent, Tenant shall pay its pro rata share of such maintenance costs, which share shall be established in an equitable manner by Landlord based upon the relative tonnage provided to the Premises, compared to the total tonnage under contract, or some other reasonable means of allocation as selected by Landlord. Landlord's good faith judgment as to the allocation of the charges described in this paragraph shall be conclusive. Included in the charges to be allocated to Tenant shall be, without limitation, the maintenance contract for the HVAC System, and any repairs and replacements not covered by the maintenance contract or any warranty or insurance.

(ii) Electric current for normal lighting, the HVAC System for the Premises, normal office machines and for the Common Areas of the Project. Electricity for the Premises (including, without limitation, electricity for the HVAC System and any lab equipment or systems) is separately submetered as of the Effective Date for electricity serving Tenant's (i) lights and plugs, (ii) heating, ventilation, air-conditioning systems serving the Premises, (iii) the Building Generator and UPS System (as hereinafter defined). Tenant shall reimburse Landlord within thirty (30) days after Tenant's receipt of an invoice therefor, as Additional Rent, for the cost of such electricity at the rates charged for such service by the city in which the Project is located or the local public utility (together with any taxes or fees), as the case may be, furnishing the same, plus any additional expense incurred by Landlord in keeping account of the electric current so consumed, including the costs of any third party utility monitoring company. Tenant shall connect any equipment installed by Tenant in the mechanical spaces and/or the roof of the Building or in the Premises to the submeter(s) serving the Premises.

(iii) Janitorial services for the Common Areas of the Project at least five (5) days per week, excepting local and national holidays. Tenant shall be responsible for retaining a janitorial contractor reasonably approved by Landlord, which contractor shall provide janitorial, trash removal and cleaning services to the Premises at least five (5) days per week and shall be reasonably approved by Landlord, and Tenant hereby acknowledges that Landlord shall have no obligation whatsoever to provide janitorial, trash removal and cleaning service to the Premises. The janitorial, trash removal and cleaning of the Premises shall be adequate to maintain the Premises in a manner consistent with the character of the Project as a first-class life science project and shall comply with Landlord's green cleaning requirements specified on Exhibit G attached to this Lease and incorporated herein.

(iv) Non-exclusive, non-attended, passenger elevator service in the Common Areas of the Project.

(v) Hot and cold running water for lavatory purposes to Common Area lavatories and water (at temperatures supplied by the utility provider) to the existing points of supply in the Premises for cleaning, fire protection, drinking, lavatory and toilet purposes in such reasonable quantities as in the judgment of Landlord is reasonably necessary for general office and laboratory use. If Landlord determines that Tenant requires, uses or consumes water for any purpose other than ordinary lavatory and drinking purposes, Landlord may install a water meter or submeter, at Tenant's sole cost and expense, and thereby measure Tenant's water consumption for all purposes and Tenant shall make payment directly to the entity providing such water if the same is separately metered or Tenant shall reimburse Landlord, within thirty (30) days after Tenant's receipt of an invoice therefor by Landlord, as Additional Rent for the cost of such water if the same is submetered at the rates charged for such service by the city in which the Project is located or the local public water district, as the case may be, furnishing the same, plus any additional expense incurred by Landlord in keeping account of the water so consumed.

(vi) Base building security system including card readers to the perimeter doors of the Building.

(vii) A backup generator and/or UPS battery system emergency service for the Premises (the "**Building Generator and UPS System**") exclusively serves the Premises. Tenant shall be entitled to use the Building Generator and UPS System during the Term in accordance with the terms of this Lease and applicable Laws. Tenant accepts the Building Generator and UPS System in its AS IS condition and Landlord expressly disclaims any warranties with regard to the Building Generator and UPS System or the installation thereof, including any warranty of merchantability or fitness for a particular purpose, and Tenant shall be responsible for determining if the Building Generator and UPS System is sufficient for Tenant's operations at the Premises and for providing any supplemental backup generator service for the Premises if necessary, subject to the terms and conditions of Sections 9(h) above. Tenant shall be responsible, at Tenant's sole cost and expense, to repair and maintain (including any necessary replacements thereto) the Building Generator and UPS System and any equipment connecting the Building Generator and UPS System to Tenant's automatic transfer switch in good working order and condition during the Term. Tenant shall be entitled to operate the Building Generator and UPS System for testing and regular maintenance only upon notice to Landlord and at times reasonably approved by Landlord. In addition, Tenant shall ensure that the Building Generator and UPS System does not result in any Hazardous Materials being introduced to the Project, and Section 28(a) will apply to Tenant's use of the Building Generator and UPS System. Landlord shall have no obligation to provide any services including, without limitation, electric current or gas service to the Tenant Generators, except that Tenant may connect the UPS System to the electrical service for the Building. Tenant shall pay for the costs of electrical service supplied to the UPS System pursuant to Section 11(a)(ii) above. Subject to applicable Laws, Tenant may install, maintain and operate necessary utility connections between the Building Generator and UPS System and the Premises (which utility connections shall be repaired and maintained by Tenant). Tenant shall pay for the costs of electrical service supplied to the Building Generator and UPS System pursuant to Section 11(a)(ii) below. Tenant shall be responsible for the cost of repairing any damage to the Building, or the cost of any necessary improvements to the Building or the Project caused by the Building Generator and UPS System. The Building Generator and UPS System shall be deemed to be a part of the Premises for purposes of Article 14 of this Lease. Tenant shall surrender the Building

Generator and UPS System at the end of the Term in the same condition as of the Commencement Date, ordinary wear and tear and damage by casualty excepted.

(viii) PH Neutralization. An acid neutralization tank ("**Acid Neutralization Tank**") is connected to and exclusively serves the Premises. Tenant shall have the right to use the Acid Neutralization Tank serving the Premises in accordance with applicable Laws. Landlord shall have the right, as part of the Tank Costs (as hereinafter defined), to install a meter and monitoring system measuring Tenant's use of the Acid Neutralization Tank to monitor the nature of Tenant waste being delivered to the Acid Neutralization Tank and ensure compliance with applicable Laws. Landlord and its contractors and consultants shall be permitted to perform periodic sampling of all substances regulated under the GLSD Permit. Tenant, as Additional Rent, shall reimburse Landlord for 100% of all costs, charges and expenses incurred by Landlord from time to time in connection with or arising out of the operation, use, maintenance, repair or refurbishment of the Acid Neutralization Tank, including all clean-up costs relating to the Acid Neutralization Tank (collectively, "**Tank Costs**"). In the event the Acid Neutralization Tank is damaged or repairs to the Acid Neutralization Tank are required, Tenant shall be responsible for one hundred percent (100%) of the cost of any repairs or replacement required as a result of such improper use by Tenant. Without limitation, if Tenant introduces into the Premises personnel or equipment or chemicals which overload the capacity of the Acid Neutralization Tank or the laboratory waste sanitary sewer system, or which are not permitted to utilize the Acid Neutralization Tank or the laboratory waste sanitary sewer system, or in any other way interferes with such system's ability to perform adequately its proper functions and/or comply with all of the foregoing, then (i) Landlord may demand that supplementary systems shall, if and as needed, be provided by Tenant as an Alteration subject to Landlord's reasonable approval, at Tenant's sole cost and expense, and (ii) in order to address any such violations, Landlord may order Tenant to immediately cease all use of the Acid Neutralization Tank and/or the laboratory waste sanitary sewer system, as applicable, that is causing the above issues, until Tenant is able to satisfy Landlord that it can comply with all such requirements. Tenant shall ensure that Tenant's use of the Acid Neutralization Tank does not result in any Hazardous Material being introduced to the Building or the Project, and Section 28(a) will apply to Tenant's use of the Acid Neutralization Tank. Tenant shall maintain a chemical management plan prohibiting the improper discharge or disposal of chemicals. Tenant shall train all laboratory personnel in the Premises on the proper disposal of chemicals and other Hazardous Material. Landlord reserves the right, at any time and from time to time, to require limitations and restrictions on discharges by Tenant to the Acid Neutralization Tank as Landlord may reasonably determine to be necessary for the operation of the Acid Neutralization Tank. Landlord's sole obligations for providing the Acid Neutralization Tank, or any acid neutralization system facilities, to Tenant shall be to use reasonable efforts to obtain and maintain the GLSD Permit, provided that Tenant reasonably cooperates with Landlord and provides all information and documents reasonably necessary in connection with the GLSD Permit, and to contract with a third party to maintain the Acid Neutralization Tank as per the manufacturer's standard maintenance guidelines. Notwithstanding anything herein to the contrary, if the Acid Neutralization Tank must be replaced and the cost thereof is not included in such third party maintenance contract, then, Landlord shall replace the Acid Neutralization Tank, it being acknowledged, however, that Tenant shall be responsible for all costs incurred in connection therewith as Tank Costs.

(ix) Landlord or an affiliate of Landlord is in the process of instituting a private new shuttle service to and from MBTA stations and pursuant to a schedule mutually agreeable to Landlord and Tenant (and which may include service to certain other properties now or hereafter owned or operated by Landlord and its affiliates) (the "**Shuttle Service**"). Subject to force majeure events, Landlord will use reasonable efforts to have the Shuttle Service operational within twelve (12) months following the Commencement Date. When the Shuttle Service becomes operational, Landlord shall provide the Shuttle Service for the Building pursuant to a schedule reasonably agreed upon by Landlord and Tenant and, at Landlord's option, other major tenants selected by Landlord in the buildings served by the Shuttle Service. In the event that the applicable parties are unable to agree upon the schedule for the Shuttle Service, Landlord shall reasonably designate the schedule for the Shuttle Service consistent with shuttle service provided by owners of Comparable Buildings. The Building's allocable share of any and all costs incurred by Landlord in providing the Shuttle Service to the Project, including, without limitation, the costs to lease vehicles, insurance premiums, fuel costs and personnel or operator costs shall be included in Operating

Costs (without regard to any exclusions listed in Section 3(c) of this Lease that may otherwise be construed to limit or exclude such costs from Operating Costs) and if no other tenants elect to participate in the Shuttle Service, then Tenant shall pay 100% of such Shuttle Service expenses. If and only so long as Tenant is the only tenant participating in the Shuttle Service (and Tenant is paying 100% of the Shuttle Service expenses), Tenant shall have the ability to elect to cancel Tenant's use of the Shuttle Service by delivery of not less than three (3) months' prior written notice[3].

Tenant shall cooperate with Landlord's efforts to cause the utilities for the Project to comply with Landlord's sustainability practices and any LEED rating (or other applicable certification standard) applicable to the Project. Such efforts may include, without limitation, the use of energy efficient bulbs in task lighting, energy efficient lighting controls and measures to avoid over-lighting interior spaces. Tenant shall comply with all reasonable rules and regulations provided to Tenant in writing which Landlord may establish for the proper functioning and protection of the common area air conditioning, heating, elevator, electrical, intrabuilding cabling and wiring and plumbing systems. Landlord shall not be liable for, and there shall be no rent abatement as a result of, any stoppage, reduction or interruption of any such services caused by governmental rules, regulations or ordinances, riot, strike, pandemic, labor disputes, breakdowns, accidents, necessary repairs or other cause that impacts the Project. Except as specifically provided in this Article 11, Tenant agrees to pay for all utilities and other services utilized by Tenant and any additional building services furnished to Tenant which are not uniformly furnished to all tenants of the Project, at the rate generally charged by Landlord to tenants of the Project for such utilities or services. In the event any governmental entity promulgates or revises any Law, or issues mandatory controls relating to the use or conservation of energy, water, gas, light or electricity, or the provision of any other utility or service furnished by Landlord in the Building, Landlord may take any appropriate action to comply with such provision of Law or mandatory controls, including the making of alterations to the Building, subject, however, to the terms and conditions of this Lease. Neither Landlord's actions nor its failure to act shall entitle Tenant to any damages, abate or suspend Tenant's obligation to pay Basic Rental and Additional Rent or constitute or be construed as a constructive or other eviction of Tenant except as otherwise specifically set forth herein. The parties hereto shall comply with all mandatory energy conservation controls and requirements applicable to the Building that are imposed or instituted by the federal, state, county or municipal governments and are of general applicability to the occupants of the Building, including, without limitation, controls on the permitted range of temperature settings in office/laboratory buildings, and requirements necessitating curtailment of the volume of energy consumption or the hours of operation of the Building. Any terms or conditions of this Lease that conflict or interfere with compliance with such controls or requirements shall be suspended for the duration of such controls or requirements. Compliance with such controls or requirements shall not be considered an eviction, actual or constructive, of Tenant from the Premises and shall not entitle Tenant to terminate this Lease or to an abatement of any rent payable hereunder.

Notwithstanding the foregoing, if there shall be an interruption, curtailment or suspension of any service necessary for the occupancy of the Premises and expressly required to be provided by Landlord under this Lease (a "**Service Interruption**") that shall materially interfere with Tenant's use of all or a material portion of the Premises for the Permitted Use (and no reasonably equivalent alternative service or supply is provided by Landlord), and if (i) such Service Interruption shall continue for five (5) consecutive business days following Tenant's written notice to Landlord of such Service Interruption, (ii) such Service Interruption is not the result of Force Majeure or the acts, negligence or willful misconduct of Tenant or any of Tenant's agents, employees, contractors or invitees, and (iii) the restoration of such Service Interruption is in the reasonable control of Landlord, then Tenant shall be entitled to an equitable abatement of Rent, based on the nature and duration of the Service Interruption, the area of the Premises affected, and the then current Rent amounts, for the period that shall begin on the sixth (6th) business day following Tenant's written notice and that shall end on the day such Service Interruption ceases and Tenant is able to use the applicable portion of the Premises for the Permitted Use. Notwithstanding anything in this Lease to the contrary, but subject to Article 10 and Article 11 (which shall govern in the event of a casualty or condemnation), the remedies expressly provided

[3] Tenant can not opt out after other tenants have opted in.

in this paragraph shall be Tenant's sole recourse and remedy in the event of an interruption of Landlord services to the Premises and shall not be applicable if such Service Interruption is associated with or the result of a Casualty or Condemnation which shall be governed by Articles 10 and 11 respectively.

(b) Excess Usage. Tenant will not, without the prior written consent of Landlord, use any apparatus or device in the Premises which will in any way increase the amount of electricity or water usually furnished or supplied for use of the Premises as general office and lab space, and Tenant shall not use utilities or other services in a manner that (i) overloads Building systems, (ii) exceeds the capacities such systems were designed to handle, or (iii) interferes with proper functioning of any Building systems or service equipment or Landlord's ability to provide services to other tenants in the Building. Landlord agrees that Tenant shall not be deemed to be using additional or excess electrical service unless Tenant's equipment causes Tenant's consumption of electricity to exceed twenty (20) watts per useable square foot within the Premises (connected load and including the HVAC System and other Building Systems and equipment serving the Premises). Tenant shall promptly respond to all reasonable informational requests made by Landlord from time to time regarding Landlord's reporting requirements under the LEED rating system (or other applicable certification standard) including, without limitation, informational requests regarding Tenant's utility usage. Landlord may survey Tenant's use of services from time to time. Tenant shall pay Landlord all costs arising out of any excess use by Tenant or anyone claiming by, through or under Tenant, including the cost of all repairs and alterations to the Pod 1 Building's mechanical and electrical systems (including the installation of any additional meters necessary to measure Tenant's excess use) and the cost of additional services made available to Tenant beyond those required by this Lease, if any.

(c) Additional Electrical Service. If Tenant shall require electric current in excess of that which Landlord is obligated to furnish under Section 11(b) above, Tenant shall first obtain the written consent of Landlord, which Landlord may refuse in its sole and absolute discretion.

(d) HVAC Balance. If any lights, machines or equipment (including but not limited to computers and computer systems and appurtenances and any lab equipment or systems) are used by Tenant in the Premises which materially affect the temperature otherwise maintained by the air conditioning system, or generate substantially more heat in the Premises than would be generated by the building standard lights and usual office and laboratory equipment, Landlord shall have the right to install any machinery and equipment which Landlord reasonably deems necessary to restore temperature balance, including but not limited to modifications to the standard air conditioning equipment, and the cost thereof, including the cost of installation and any additional cost of operation and maintenance occasioned thereby, shall be paid by Tenant to Landlord upon demand by Landlord.

(e) Telecommunications. Upon request from Tenant from time to time, Landlord will provide Tenant with a listing of telecommunications and media service providers serving the Project, and Tenant shall have the right to contract directly with the providers of its choice. If Tenant wishes to contract with or obtain service from any provider which does not currently serve the Project or wishes to obtain from an existing carrier services which will require the installation of additional equipment, such provider must, prior to providing service, enter into a written agreement with Landlord setting forth the terms and conditions of the access to be granted to such provider. In considering the installation of any new or additional telecommunications cabling or equipment at the Project, Landlord will consider all relevant factors in a reasonable and non-discriminatory manner, including, without limitation, the existing availability of services at the Project, the impact of the proposed installations upon the Project and its operations and the available space and capacity for the proposed installations. Landlord may also consider whether the proposed service may result in interference with or interruption of other services at the Project or the business operations of other tenants or occupants of the Project. In no event shall Landlord be obligated to incur any costs or liabilities in connection with the installation or delivery of telecommunication services or facilities at the Project. All such installations shall be subject to Landlord's prior approval and shall be performed in accordance with the terms of Article 9. If Landlord approves the proposed installations in accordance with the foregoing, Landlord will deliver its standard form agreement upon request and will use commercially reasonable efforts to promptly enter into an agreement on reasonable and non-discriminatory terms with a qualified,

licensed and reputable carrier confirming the terms of installation and operation of telecommunications equipment consistent with the foregoing.

(f) Roof Equipment. If Tenant desires to use the roof of the Project to install communication equipment to be used from the Premises and/or other equipment serving the Premises, Tenant may so notify Landlord in writing ("**Roof Equipment Notice**"), which Roof Equipment Notice shall describe the specifications for the equipment desired by Tenant and shall include elevations for such equipment. Subject to all governmental laws, rules and regulations, Tenant and Tenant's contractors (which shall first be approved by Landlord, such approval not to be unreasonably withheld, conditioned, or delayed) shall then have the right and access subject to the terms and conditions of this Lease to install, repair, replace, remove, operate and maintain Tenant's equipment on the portion of the roof of the Pod 1 Building reasonably approved in advance by Landlord (collectively, the "**Roof Equipment**"), and which Roof Equipment may include, without limitation, HVAC equipment, other equipment serving the Premises and/or so-called "satellite dishes" or other similar communication devices, such as antennae, cable, wiring, conduits and related equipment serving the Premises from the rooftop, mechanical equipment, and heat exchanges, for the purpose of supplying HVAC to the Premises, receiving and sending radio, television, computer, telephone or other communication signals (at a location on the roof of the Project reasonably satisfactory to Landlord and Tenant and suitable for the effective reception, transmission and operation of such Roof Equipment), and/or otherwise serving the Tenant in the conduct of its business operations from the Premises for the Permitted Use. Subject to Landlord's approval as part of the plans required hereunder as further provided herein and further subject to the terms and conditions of this Lease relating to construction of the Improvement and Alterations (as applicable), Tenant shall have the non-exclusive right to use its proportionate share of shafts, ducts, conduits, chases, utility closes and other facilities of the Building or Project as is reasonably necessary to connect the Roof Equipment to Tenant's machinery and equipment in or about the Premises. Landlord shall have the right to require Tenant to install aesthetic screening reasonably designated by Landlord if the Roof Equipment is visible from street level. To the extent required with respect to the maintenance and repair of the Project or applicable laws, upon at least forty-five (45) days 'prior written notice to Tenant, Landlord shall have the right to require Tenant to relocate, at Landlord's sole cost, the Roof Equipment at any time to another location on the roof of the Pod 1 Building reasonably approved by Tenant, provided that such relocation will not materially and adversely affect the use of or otherwise materially and adversely interfere with the use of the Roof Equipment. Tenant shall retain Landlord's designated roofing contractor to make any necessary penetrations and associated repairs to the roof in order to preserve Landlord's roof warranty and Landlord shall use reasonable efforts to ensure that such contractor is competitively priced and reasonably available. In addition, subject to Landlord's Rules and Regulations, Landlord shall grant Tenant and such contractors with access to the roof of the Project on a twenty-four (24) hour per day basis to inspect and service its equipment on the roof. Tenant's installation and operation of the Roof Equipment shall be governed by the following terms and conditions: Tenant's right to install, replace, repair, remove, operate and maintain the Roof Equipment shall be subject to all governmental laws, rules and regulations and Landlord makes no representation that such laws, rules and regulations permit such installation and operation. The location of the Roof Equipment shall be subject to Landlord's reasonable approval, which shall not be unreasonably withheld, conditioned or delayed so long as such Roof Equipment will not, in Landlord's reasonable discretion, have an adverse effect on the exterior appearance of the Pod 1 Building or the Project, adversely affect the structural portions of or building systems or operations of the Pod 1 Building (in which event Landlord may withhold its approval in its sole but good faith discretion). All plans for the Roof Equipment must be provided to and approved by Landlord. All costs of installation, operation and maintenance of the Roof Equipment and any necessary related equipment (including, without limitation, costs of obtaining any necessary permits and connections to the Project's electrical system) shall be borne by Tenant. It is expressly understood that, except as provided herein, Landlord retains the right to use the roofs of the Project (including the Pod 1 Building) for any purpose whatsoever. Tenant shall use the Roof Equipment so as not to cause any material interference to other tenants in the Project or with any other tenant's Roof Equipment, to the extent such other tenant's Roof Equipment is being operated on the roof prior to the installation of Tenant's Roof Equipment and there is no subsequent modification to such other tenant's Roof Equipment or the operation of same, and not to damage the Project or interfere with the normal operation of the Project. The Roof Equipment must be properly secured and installed so as not to be affected by high winds or other elements and must be properly grounded. The weight of the Roof Equipment may not exceed the load limits specified by Landlord's architect or engineer and in no event may the Roof Equipment or any appurtenant wiring or cable interfere

with or otherwise adversely affect the electrical, HVAC, mechanical, structural, life/safety or other systems of the Project. Except as expressly provided herein, Landlord makes no representation that the Roof Equipment will be able to receive or transmit communication signals without interference or disturbance (whether or not by reason of the installation or use of similar equipment by others on the roof of adjacent buildings) and Tenant agrees that Landlord shall not be liable to Tenant therefor. Tenant shall not lease or otherwise make the Roof Equipment available to any third party (except approved Transferees) and the Roof Equipment shall be only for Tenant's or approved Transferees' use in connection with the conduct of their business in the Premises. Tenant shall (i) be solely responsible for any damage caused as a result of the Roof Equipment, (ii) promptly pay any tax, license or permit fees charged pursuant to any laws or regulations in connection with the installation, maintenance or use of the Roof Equipment and comply with all reasonable precautions and safeguards recommended by all governmental authorities, and (iii) pay for all necessary repairs, replacements to or maintenance of the Roof Equipment, except to the extent necessitated due to the negligence or willful misconduct of Landlord, its agents, employees, or contractors (but subject to the waivers described in Section 14(d)). The Roof Equipment shall remain the sole property of Tenant. Tenant shall remove the Roof Equipment and related equipment at Tenant's sole cost and expense upon the expiration or sooner termination of this Lease or upon the imposition of any governmental law or regulation which may require removal, and shall repair the Project upon such removal to the extent required by such work of removal. If Tenant fails to remove the Roof Equipment and repair the Project within thirty (30) days after the expiration or earlier termination of this Lease, Landlord may do so at Tenant's expense. The provisions of this clause (f) shall survive the expiration or earlier termination of this Lease. The Roof Equipment shall be deemed to constitute a portion of the Premises for purposes of Articles 13 and 14 of this Lease. Tenant shall not be required to pay Landlord any fee for use or operation of the Roof Equipment or the space used by the Roof Equipment, it being understood that Tenant is only responsible to pay or reimburse Landlord for the actual, reasonable, out-of-pocket expenses that Landlord incurs in connection with the Roof Equipment to the extent attributable to Tenant's request for specific services. Landlord shall use reasonable diligence to restore any interruption in electrical service to the Roof Equipment promptly, but Tenant shall have no claim for lost business or lost profits or other damages due to any such interruption. Tenant acknowledges that Landlord may, as part of its maintenance and repair obligations at the Project, require a temporary interruption of electrical service that may cause a temporary disruption of service to the Roof Equipment. Landlord shall provide Tenant with no less than three (3) business day's prior written notice of any such interruption, except in the event of an emergency but failure to provide such notice shall not constitute a default by Landlord hereunder. Landlord agrees to make a reasonable effort to schedule any such interruption outside the Project's normal business hours.

(g) Project Amenities. Throughout the Term of this Lease, at no additional cost to Tenant or its employees (other than Tenant's payment of Tenant's Share of Operating Expenses as provided herein) the Common Areas shall contain the following for the non-exclusive use and enjoyment of Tenant and Tenant's employees: (a) a "grab and go" café; (b) outdoor café seating; (c) fitness center and men's and women's shower facilities, and (d) a conference room (collectively, the "**Amenities**") Landlord (or an operator selected by the Landlord) shall operate and maintain the Amenities in a manner consistent with other comparable office and laboratory buildings in the greater Boston suburban north market ("**Comparable Buildings**"). The Amenities may be unavailable from time to time on a temporary basis, without liability to Tenant and without affecting this Lease, due to construction activities, repairs, maintenance or alterations, Force Majeure, casualty or a change in the managing or operating company hired by Landlord. Use of the Amenities shall be subject to Landlord's Rules and Regulations regarding the use thereof; including, without limitation, a requirement for execution of a waiver of liability and indemnity agreement by Tenant's employees and invitees using the fitness center and shower facilities for Landlord's benefit in form and substance reasonably satisfactory to Landlord.

ARTICLE 12
RIGHTS OF LANDLORD

(a) Right of Entry. Landlord and its agents shall have the right to enter the Premises at all reasonable times upon 24 hours prior written notice (except that no notice shall be required in the case of an emergency, notice of an unsafe condition or regularly scheduled service) for the purpose of examining or inspecting the Premises, determining whether Tenant is in compliance with its obligations hereunder, serving or posting and keeping posted thereon notices as provided by law, or which Landlord deems necessary for the protection of Landlord or the Project, showing the same to prospective tenants (up to twelve (12) months prior to the end of the Term), lenders or purchasers of the Project, and for making such alterations, repairs, improvements or additions to the Premises or to the Project as Landlord may deem necessary or desirable. If Tenant shall not be personally present to open and permit an entry into the Premises at any time when such an entry by Landlord is necessary or permitted hereunder, Landlord may enter by means of a master key, or may forcibly enter in the case of an emergency, in each event without liability to Tenant and without affecting this Lease. Notwithstanding anything to the contrary contained herein, Tenant shall be entitled to have a representative present for any access by Landlord or any Landlord agents and Landlord and any Landlord agents shall abide by Tenant's reasonable security requirements in exercising its rights under this Section 12(a), provided, however, Landlord's access shall not be delayed or prevented if Tenant does not make such representative available at the designated time.

Tenant shall have the right to reasonably designate, by written notice to Landlord (together with a floor plan identifying the same), certain laboratory areas of the Premises (and expressly excluding any core areas of the Building necessary for operation of the Building or the performance Landlord's obligations under Article 9) as secure areas to which Landlord shall not have access for purposes of showing such areas to third parties without being accompanied by a representative of Tenant (the "Secured Areas") and provided Tenant makes such representative available at the identified time. Landlord may not enter such Secured Areas except (i) in the case of an emergency or notice of an unsafe condition, (ii) for purposes of performing any of the services, repairs, maintenance or replacements required of Landlord under this Lease, or (iii) in the event of a Landlord inspection or to show the Premises to prospective lenders or purchasers or, during the final twelve (12) months of the Lease Term, to prospective tenants (it being understood and agreed that prior to commencing any non-emergency inspection of the Secured Areas, Landlord shall be required to provide Tenant with two (2) business days' prior written notice of the specific date and time of such Landlord inspection). Landlord shall not be responsible for any obligations under this Lease or applicable Laws with respect to the Secured Areas to the extent Landlord is not permitted reasonable and timely access by Tenant to the Secured Areas of the Premises and Tenant's indemnity obligation under Section 13(a) shall apply to Tenant's failure to provide Landlord with timely access to Secured Areas.

(b) Maintenance Work. Landlord reserves the right from time to time, but subject to payment by and/or reimbursement from Tenant as otherwise provided herein: (i) to install, use, maintain, repair, replace, relocate and control for service to the Premises and/or other parts of the Project pipes, ducts, conduits, wires, cabling, appurtenant fixtures, equipment spaces and mechanical systems, wherever located in the Premises or the Project, (ii) to alter, close or relocate any facility in the Premises or the Common Areas or otherwise conduct any of the above activities for the purpose of complying with a general plan for fire/life safety for the Project or otherwise, or to comply with any applicable Law. Landlord shall attempt to perform any such work with the least inconvenience to Tenant as is reasonably practicable, but in no event shall Tenant be permitted to withhold or reduce Basic Rental or other charges due hereunder as a result of same, make any claim for constructive eviction or otherwise make any claim against Landlord for interruption or interference with Tenant's business and/or operations.

ARTICLE 13
INDEMNITY; EXEMPTION OF LANDLORD FROM LIABILITY

(a) Indemnity. To the fullest extent permitted by applicable Law, except to the extent caused by the negligence or willful misconduct of any Landlord Parties (as hereinafter defined) and subject to Section 14(d) below, Tenant shall indemnify, defend and hold Landlord and its members, officers, directors, employees, contractors, property manager and agents (collectively, "**Landlord Parties**") harmless and release the Landlord Parties from any loss, cost, liability, damage or expense including, but not limited to, penalties, fines, attorneys' fees and costs

(collectively, "**Claims**") arising from or alleged to be arising from (i) the use of the Premises or the Project by Tenant or any of the Tenant Parties, or (ii) from the conduct of any Tenant Parties' business or from any activity, work or thing which may be permitted or suffered by Tenant or any of the Tenant Parties in the Premises or the Project or (iii) any Hazardous Materials or other pollutants brought, generated, stored, used, installed, disposed of, spilled, released, emitted or discharged on, in or from the Premises, the Building or the Project, or allowed, permitted or suffered to be brought, generated, stored, used, installed, disposed of, spilled, released, emitted or discharged thereon, therein or therefrom, by Tenant or any Tenant Parties, in violation of Article 28 or otherwise and shall further indemnify, defend and hold Landlord and the Landlord Parties harmless from and against any and all Claims arising from any breach or default in the performance of any obligation on Tenant's part to be performed under this Lease or arising from any negligence or willful misconduct of Tenant or any of the Tenant Parties in or about the Project and from any and all costs, reasonable attorneys' fees and costs, expenses and liabilities incurred in the defense of any Claim or any action or proceeding brought thereon, including negotiations in connection therewith. Tenant hereby assumes all risk of damage to property or injury to persons in or about the Premises from any cause, and Tenant hereby waives all claims in respect thereof against Landlord and the Landlord Parties, excepting where the damage is caused solely by the gross negligence or willful misconduct of Landlord or the Landlord Parties. The "**Tenant Parties**" shall mean and include: any affiliate of Tenant, any subtenant, licensee or other permitted occupant of the Premises, and each of their respective direct or indirect partners, officers, shareholders, directors, members, trustees, beneficiaries, servants, employees, principals, contractors, licensees, agents, invitees or representatives.

Except to the extent caused by the negligence or willful misconduct of Tenant or any of the Tenant Parties and subject to Section 14(d) below, Landlord shall indemnify, defend and hold Tenant harmless from any Claims to the extent arising from or alleged to be arising from the gross negligence or willful misconduct of Landlord or any of the Landlord Parties in or about the Project and from any and all reasonable costs, reasonable attorneys' fees and costs, expenses and liabilities incurred in the defense of any Claim or any action or proceeding brought thereon, including negotiations in connection therewith.

(b) Exemption of Landlord from Liability. Landlord and the Landlord Parties shall not be liable for injury to Tenant's business, or loss of income therefrom, however occurring (including, without limitation, from any failure or interruption of services or utilities or as a result of Landlord's negligence), or, except in connection with damage or injury resulting from the sole gross negligence and willful misconduct of Landlord or the Landlord Parties, for damage that may be sustained by the person, goods, wares, merchandise or property of Tenant, its employees, invitees, customers, agents, or contractors, or any other person in, on or about the Premises directly or indirectly caused by or resulting from any cause whatsoever, including, but not limited to, fire, steam, electricity, gas, water, or rain which may leak or flow from or into any part of the Premises, or from the breakage, leakage, obstruction or other defects of the pipes, sprinklers, wires, appliances, plumbing, air conditioning, light fixtures, or mechanical or electrical systems, or from intrabuilding cabling or wiring, whether such damage or injury results from conditions arising upon the Premises or upon other portions of the Project or from other sources or places and regardless of whether the cause of such damage or injury or the means of repairing the same is inaccessible to Tenant. Landlord and the Landlord Parties shall not be liable to Tenant for any damages arising from any willful or negligent action or inaction of any other tenant of the Project.

(c) Security. Tenant acknowledges that Landlord's election whether or not to provide any type of mechanical surveillance or security personnel whatsoever in the Project is solely within Landlord's discretion; Landlord and the Landlord Parties shall have no duty or liability in connection with the provision, or lack, of such services, and Tenant hereby agrees to hold Landlord and the Landlord Parties harmless with regard to any such potential claim. Landlord and the Landlord Parties shall not be liable for losses due to theft, vandalism, or like causes.

ARTICLE 14
INSURANCE

(a) Tenant's Insurance. Tenant, shall at all times during the Term of this Lease, and at its own cost and expense, procure and continue in force the following insurance coverage: (i) Commercial General Liability Insurance, written on an occurrence basis, with a combined single limit for bodily injury and property damages of not less than One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) in the annual aggregate, including products liability coverage if applicable on a claims-made policy form, owners and contractors protective coverage, blanket contractual coverage including both oral and written contracts, and personal injury coverage, covering the insuring provisions of this Lease and the performance of Tenant of the indemnity and exemption of Landlord from liability agreements set forth in Article 13 hereof; (ii) umbrella/excess liability insurance in an amount of not less than Ten Million Dollars ($10,000,000) for each occurrence and general aggregate; (iii) a policy of standard fire, extended coverage and special extended coverage insurance (special form), including a vandalism and malicious mischief endorsement, sprinkler leakage coverage and sprinkler leakage where sprinklers are provided in an amount equal to the 100% full replacement value new without deduction for depreciation of all (A) Improvements in the Premises whether installed by or for Tenant or otherwise existing in the Premises, including but not limited to all mechanical, plumbing, heating, ventilating, air conditioning, electrical, telecommunication and other equipment, systems and facilities, and (B) trade fixtures, furniture, equipment and other personal property installed by or for the Tenant or otherwise located in the Premises and any equipment and installations made by any Tenant Party outside of the Premises (collectively, the "**Tenant Insured Property**") and with such policy naming Landlord as loss payee with respect to the Improvements and systems referenced in subclause (A) above; (iv) Worker's Compensation and employers liability coverage as required by law and with limits of not less than $1,000,000, each accident, $1,000,000, disease policy limit, and $1,000,000, disease each employee (which policies shall contain waivers of subrogation in favor of Landlord); (v) boiler and machinery insurance on all boilers, pressure vessels, gas-fired equipment, air conditioning equipment installed by the Tenant and systems serving the Premises and, if not covered by the insurance described in subsection (iii), then the insurance specified in this subsection (v) shall be in an amount not less than one hundred percent (100%) of full replacement cost of such items; and (vi) business interruption, loss of income and extra expense insurance with coverage that will reimburse Tenant for all direct and indirect loss of income and changes and costs incurred arising out of all named perils insured against by Tenant's policies of property insurance, including prevention of, or denial of use of or access to, all or any part of the Premises or Project as a result of those named perils sufficient to cover a period of interruption of not less than twelve (12) months of the loss of income, charges and costs contemplated under this Lease. Tenant acknowledges and agrees that, as of the Commencement Date, Landlord has agreed to conditionally waive, with respect to Tenant and the Premises, Landlord's customary requirement that tenants in the Building carry pollution legal liability insurance. If Landlord reasonably determines during the Term that Tenant's use of and/or research activities in the Premises have materially changed in a manner that materially increases the chemical and hazardous materials usage in the Premises, Landlord shall have the right to elect to require Tenant to if carry and maintain pollution legal liability insurance with limits of not less than $1,000,000 per incident with a $2,000,000 policy aggregate and shall be maintained without interruption from the effective date of such coverage until at least three (3) years after the expiration or termination of this Lease or after Tenant ceases to occupy the Premises, whichever is later. Such coverage shall include bodily injury, sickness, disease, death or mental anguish or shock sustained by any person; property damage including damage to or destruction of tangible property including the resulting loss of use thereof, clean-up costs, and the loss of use of tangible property that has not been damaged or destroyed; defense costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such compensatory damages; and diminution in value of the Project or any portion thereof. Such coverage shall apply to both sudden and non-sudden pollution conditions including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, the atmosphere or any watercourse or body of water and shall include coverage for transportation liability and non-owned offsite disposal locations. Claims-made coverage is permitted for Pollution Legal Liability insurance, provided the policy retroactive date is as of the effective date of such coverage, and coverage is continuously maintained during all periods in which Tenant occupies the Premises. Tenant shall carry and

maintain during the entire Term (including any option periods, if applicable), at Tenant's sole cost and expense, increased amounts of the insurance required to be carried by Tenant pursuant to this Article 14 and such other reasonable types of insurance coverage and in such reasonable amounts covering the Premises and Tenant's operations therein, as may be reasonably required by Landlord so long as such increased amounts and/or other types of insurance coverage are then generally required by comparable landlords of Comparable Buildings.

(b) Form of Policies. The aforementioned minimum limits of policies and Tenant's procurement and maintenance thereof shall in no event limit the liability of Tenant hereunder. The Commercial General Liability Insurance policy shall name Landlord, the Landlord Parties, Landlord's property manager, Landlord's lender(s) and such other persons or firms as Landlord specifies from time to time, as additional insureds with an appropriate endorsement to the policy(s). All such insurance policies carried by Tenant shall be with companies having a rating of not less than A-VIII in Best's Insurance Guide. Tenant shall furnish to Landlord, from the insurance companies, or cause the insurance companies to furnish, certificates of coverage. The deductible under each such policy shall be reasonably acceptable to Landlord. No such policy shall be cancelable or subject to reduction of coverage except after thirty (30) days' prior written notice to Landlord by the insurer; provided, however, in the event Tenant's insurer will not provide such notice, Tenant shall be obligated to provide Landlord with thirty (30) days' prior written notice of such cancellation or reduction in coverage. All such policies shall be endorsed to agree that Tenant's policy is primary and that any insurance carried by Landlord is excess and not contributing with any Tenant insurance requirement hereunder. Tenant shall, at least five (5) days prior to the expiration of such policies, furnish Landlord with renewals certificate of insurance. Tenant agrees that if Tenant does not take out and maintain such insurance or furnish Landlord with renewals in a timely manner and if such failure shall continue for more than three (3) business days after notice thereof from Landlord, Landlord may (but shall not be required to) procure said insurance on Tenant's behalf and charge Tenant the cost thereof, which amount shall be payable by Tenant within thirty (30) days after Tenant's receipt of an invoice therefor, with interest (at the rate set forth in Section 20(e) below) from the date such sums are expended. Tenant shall have the right to provide such insurance coverage pursuant to blanket policies obtained by Tenant, provided such blanket policies expressly afford coverage to the Premises and to Tenant as required by this Lease.

(c) Landlord's Insurance. Landlord shall, as a cost to be included in Operating Costs, procure and maintain at all times during the Term of this Lease, a policy or policies of insurance covering loss or damage to the Project (excluding Tenant Insured Property) in the amount of the full replacement cost without deduction for depreciation thereof, providing protection against all perils included within the classification of fire and extended coverage, vandalism coverage and malicious mischief, sprinkler leakage, water damage, and special extended coverage on the building. Additionally, Landlord may carry: (i) Bodily Injury and Property Damage Liability Insurance and/or Excess Liability Coverage Insurance; and (ii) Earthquake and/or Flood Damage Insurance; and (iii) Rental Income Insurance; and (iv) any other forms of insurance Landlord may deem appropriate or any lender may require. Such insurance may be provided by group or blanket policies carried by Landlord.

(d) Waiver of Subrogation. Notwithstanding anything contained in this Lease to the contrary, Landlord and Tenant hereby agree and hereby waive any and all rights of recovery against each other for loss or damage occurring to the Premises or the Building or any of Landlord's or Tenant's property contained therein regardless of the cause of such loss or damage to the extent that the loss or damage is covered by the injured party's insurance or the insurance the injured party is required to carry under this Lease, whichever is greater. Any deductibles and such self-insured retentions shall be deemed to be "insurance" for purposes of this waiver. Landlord and Tenant each agree to require their respective insurers issuing the insurance described in Section 14(a)(iii), and the first sentence of Section 14(c), to waive any rights of subrogation that such companies may have against the other party. Tenant hereby waives any right that Tenant may have against Landlord and Landlord hereby waives any right that Landlord may have against Tenant as a result of any loss or damage to the extent such loss or damage is insurable under such policies. The insurance policies required by this Lease shall contain no provision that would invalidate or restrict the parties' waiver and release of the rights of recovery in this section.

(e) Compliance with Insurance Requirements. Tenant agrees that it will not, at any time, during the Term of this Lease, carry any stock of goods or do anything in or about the Premises that will in any way tend to increase the insurance rates upon the Project. Notwithstanding anything to the contrary contained herein, Tenant shall not be liable for any increases in the rate of insurance unless such increases arise from Tenant's particular manner of use of the Premises (as opposed to general office and laboratory use). Tenant agrees to pay Landlord forthwith, within thirty (30) days after Tenant's receipt of an invoice therefor, the amount of any increase in premiums for insurance that may be carried during the Term of this Lease, or the amount of insurance to be carried by Landlord on the Project resulting from the foregoing, or from Tenant doing any act in or about the Premises that does so increase the insurance rates, whether or not Landlord shall have consented to such act on the part of Tenant. Tenant, at Tenant's expense, shall comply with all rules, orders, regulations or requirements of the American Insurance Association (formerly the National Board of Fire Underwriters) and with any similar body. Tenant shall also provide Landlord and Landlord's insurer(s) with such information regarding the use of the Premises and any damage to the Premises as they may require in connection with the placement of insurance for the Premises or the adjusting of any losses to the Premises, provided that any non-public information provided by Tenant with respect to Tenant's use of the Premises shall be kept confidential. If Tenant installs upon the Premises any electrical equipment which causes an overload of electrical lines of the Premises, Tenant shall at its own cost and expense, in accordance with all other Lease provisions (specifically including, but not limited to, the provisions of Article 9, 10 and 11 hereof), make whatever changes are necessary to comply with requirements of the insurance underwriters and any governmental authority having jurisdiction thereover, but nothing herein contained shall be deemed to constitute Landlord's consent to such overloading. Tenant shall, at its own expense, comply with all insurance requirements applicable to the Premises including, without limitation, the installation of fire extinguishers or an automatic dry chemical extinguishing system.

ARTICLE 15
ASSIGNMENT AND SUBLETTING

Tenant shall have no right or power to, either voluntarily, involuntarily, by operation of law or otherwise, sell, assign, transfer or hypothecate this Lease, or sublet the Premises or any part thereof, or permit the Premises or any part thereof to be used or occupied by anyone other than Tenant or Tenant's employees without the prior written consent of Landlord, which consent shall not be unreasonably withheld, conditioned or delayed. If Tenant is a corporation, unincorporated association, partnership or limited liability company, the sale, assignment, transfer or hypothecation of any class of stock or other ownership interest in such corporation, association, partnership or limited liability company in excess of fifty percent (50%) in the aggregate shall be deemed a "Transfer" within the meaning and provisions of this Article 15, provided, however, a sale or other transfer of shares of stock (or any member interest if Tenant is a limited liability company) in Tenant in connection with an initial public offering of Tenant's stock on a nationally-recognized stock exchange or the sale or transfer of any stock of Tenant (or any member interest if Tenant is a limited liability company) being traded on a national securities exchange, shall not be deemed a Transfer for purposes of this Article 15. Tenant may transfer its interest pursuant to this Lease only upon the following express conditions, which conditions are agreed by Landlord and Tenant to be reasonable:

(a) That the proposed Transferee (as hereafter defined) shall be subject to the prior written consent of Landlord, which consent will not be unreasonably withheld, conditioned or delayed, but, without limiting the generality of the foregoing, it shall be reasonable for Landlord to deny such consent if:

(i) The use to be made of the Premises by the proposed Transferee is (A) not generally consistent with the tenancies in the Project, or (B) a use which conflicts with any so-called "exclusive" then in favor of another tenant of the Project or any other buildings which are in the same complex as the Project, or (C) a use that is not compatible with any existing certification or a planned future certification of the Project under the LEED rating system (or other applicable certification standard), or (D) a use which would be prohibited by any other terms of this Lease (including but not limited to any Rules and Regulations then in effect), or (E) a use other than any use expressly permitted under the Permitted Use;

(ii) With respect to an assignment, the financial responsibility of the proposed Transferee is not reasonably satisfactory to Landlord or in any event not at least equal to the financial responsibility possessed by Tenant as of the date of execution of this Lease;

(iii) The proposed Transferee is either a governmental agency or instrumentality thereof; or

(iv) Either the proposed Transferee or any person or entity which directly or indirectly controls, is controlled by or is under common control with the proposed Transferee (A) occupies space in the Project or any other buildings which are located in the same complex as the Project at the time of the request for consent, or (B) is negotiating with Landlord or has negotiated with Landlord during the six (6) month period immediately preceding the date of the proposed Transfer, to lease space in the Project or any other buildings which are located in the same complex as the Project.

(b) Upon Tenant's submission of a request for Landlord's consent to any such Transfer, Tenant shall pay to Landlord Landlord's then standard processing fee, if any, and reasonable attorneys' fees and costs incurred in connection with the proposed Transfer, which fees and costs will not exceed $3,000.00, unless Tenant or its Transferee materially negotiates Landlord's form of consent agreement;

(c) That the proposed Transferee shall execute an agreement pursuant to which it shall agree to perform faithfully and be bound by all of the terms, covenants, conditions, provisions and agreements of this Lease applicable to that portion of the Premises so transferred; and

(d) That an executed duplicate original of said assignment and assumption agreement or other Transfer on a form reasonably approved by Landlord, shall be delivered to Landlord within five (5) days after the execution thereof, and that such Transfer shall not be binding upon Landlord until the delivery thereof to Landlord and the execution and delivery of Landlord's consent thereto. It shall be a condition to Landlord's consent to any subleasing, assignment or other transfer of part or all of Tenant's interest in the Premises ("**Transfer**") that (i) upon Landlord's consent to any Transfer, Tenant shall pay and continue to pay Landlord fifty percent (50%) of any "Transfer Premium" (defined below), received by Tenant from the Transferee; (ii) any sublessee of part or all of Tenant's interest in the Premises shall agree that in the event Landlord gives such sublessee notice that Tenant is in default under this Lease (beyond applicable notice and cure periods), such sublessee shall thereafter make all sublease or other payments directly to Landlord, which will be received by Landlord without any liability whether to honor the sublease or otherwise (except to credit such payments against sums due under this Lease), and any sublessee shall agree to attorn to Landlord or its successors and assigns at their request should this Lease be terminated by Landlord in accordance with Article 20 below, except that in no event shall Landlord or its successors or assigns be obligated to accept such attornment; (iii) any such consent provided by Landlord shall be effected on forms supplied by Landlord and/or its legal counsel; (iv) Landlord may require that Tenant not then be in default hereunder (beyond applicable notice and cure periods); and (v) Tenant or the proposed subtenant or assignee (collectively, "**Transferee**") shall agree to pay Landlord, within thirty (30) days after Tenant's receipt of an invoice therefor, as Additional Rent, a sum equal to the additional costs, if any, incurred by Landlord for maintenance and repair as a result of any change in the nature of occupancy caused by such subletting or assignment. "**Transfer Premium**" shall mean all rent, Additional Rent or other consideration payable by a Transferee in connection with a Transfer in excess of the Basic Rental and Direct Costs payable by Tenant under this Lease during the term of the Transfer, after deducting reasonable actual out-of-pocket brokerage expenses incurred by Tenant and unamortized improvements, costs or allowances paid for by Tenant in connection therewith and any rental concessions or free rent periods (not in excess of six (6) months of free rent). If such Transfer is for less than all of the Premises, the Transfer Premium shall be calculated on a rentable square foot basis. The calculation of "Transfer Premium" shall also include, but not be limited to, key money, bonus money or other cash consideration paid by a Transferee to Tenant in connection with such Transfer, and any payment in excess of fair market value for services rendered by Tenant to the Transferee and any payment in excess of fair market value for assets, fixtures, inventory, equipment, or furniture transferred by Tenant to the Transferee in connection with such Transfer. Any Transfer of this Lease which is not in compliance with the provisions of this Article 15 shall

be voidable by written notice from Landlord. In no event shall the consent by Landlord to any Transfer be construed as relieving Tenant or any Transferee from obtaining the express written consent of Landlord to any further Transfer, or as releasing Tenant from any liability or obligation hereunder whether or not then accrued and Tenant shall continue to be fully liable therefor. No collection or acceptance of rent by Landlord from any person other than Tenant shall be deemed a waiver of any provision of this Article 15 or the acceptance of any Transferee hereunder, or a release of Tenant (or of any Transferee of Tenant). Notwithstanding anything to the contrary in this Lease, if Tenant or any proposed Transferee claims that Landlord has unreasonably withheld, conditioned or delayed its consent under this Article 15 or otherwise has breached or acted unreasonably under this Article 15, their sole remedies shall be a declaratory judgment and an injunction for the relief sought without any monetary damages, and Tenant hereby waives all other remedies, including, without limitation, any right at law or equity to terminate this Lease, on its own behalf and, to the extent permitted under all applicable Laws, on behalf of the proposed Transferee.

(e) Notwithstanding anything to the contrary contained in this Article 15, in the case of a proposed assignment or sublease of 50% or more of the rentable area of the Premises for all or substantially all of the remainder of the then Term (i.e. if such sublease would expire with twelve (12) or fewer months remaining prior to the expiration of the Term and taking into account any extension option previously exercised by Tenant), Landlord shall have the option, by giving written notice to Tenant within thirty (30) days after Landlord's receipt of a request for consent to a proposed Transfer, to terminate this Lease as to the portion of the Premises that is the subject of the proposed Transfer. If this Lease is so terminated with respect to less than the entire Premises, the Basic Rental and Tenant's Proportionate Share shall be prorated based on the number of rentable square feet retained by Tenant as compared to the total number of rentable square feet previously contained in the Premises, and this Lease as so amended shall continue thereafter in full force and effect, and upon the request of either party, the parties shall execute written confirmation of the same. Notwithstanding anything to the contrary contained herein, if Landlord notifies Tenant that Landlord will be exercising its rights hereunder, Tenant shall have the right, for a period of five (5) business days following receipt of such notice from Landlord, *time being of the essence*, to notify Landlord in writing that it wishes to withdraw such offer and, in such event, this Lease shall continue in full force and effect and Tenant will not enter into the proposed Transfer. The provisions of this Section 15(e) shall not apply to any Permitted Transfers (as hereinafter defined).

(f) Notwithstanding anything to the contrary contained in this Article 15, provided no Event of Default has occurred and is then continuing, Tenant shall have the right to assign this Lease, sublet or enter into any type of use or occupancy agreement for all or any portion of the Premises without Landlord's consent (a "**Permitted Transfer**"), but with no less than thirty (30) days' prior notice to Landlord, to (i) an Affiliate of Tenant, (ii) another Flagship Pioneering Portfolio Company (as hereinafter defined) or (iii) any entity into or with which Tenant is merged or consolidated, or to which all or substantially all of Tenant's stock or assets are transferred (any of the foregoing, a "**Successor Entity**"); provided, however, that in any such event: (a) use of the Premises shall be for any use under the Permitted Use; (b) in the event of any Permitted Transfer which is an assignment of this Lease to an Affiliate of Tenant or Successor Entity or a Flagship Pioneering Portfolio Company, the assignee shall have a tangible net worth (not including goodwill as an asset) computed in accordance with generally accepted accounting principles ("**Net Worth**") at least equal to the greater of the Net Worth of Tenant on the date of execution of this Lease or the Net Worth of Tenant on the day that is three (3) months prior to the effective date of such Transfer, and Landlord has been provided with financial statements or evidence otherwise reasonably satisfactory to Landlord of the same; and (c) any such Transfer under clauses (i) or (ii) above shall be for an independent business purpose and not a means to circumvent the provisions of this Article 15. The term "**Affiliate**" shall mean any entity that is controlled by, controls or is under common control with, Tenant. If any Affiliate of Tenant to which this Lease is assigned or the Premises sublet (in whole or in part) shall cease to be an Affiliate of Tenant, such cessation shall be considered an assignment or subletting requiring Landlord's consent in accordance with the standards set forth in Article 15. "**Control,**" as used in this Article 15, shall mean the ownership, directly or indirectly, of greater than fifty percent (50%) of the voting securities of, or possession of the right to vote, in the ordinary direction of its affairs, of greater than fifty percent (50%) of the voting interest in, an entity. A "**Flagship Pioneering Portfolio Company**" shall

mean an entity that is being funded in whole or in part by Flagship Pioneering, Inc. ("**FPI**") or one or more investment funds managed by FPI, or managed by an entity under common control with FPI.

ARTICLE 16
DAMAGE OR DESTRUCTION

If the Project is damaged by fire or other insured casualty and the insurance proceeds have been made available therefor by the holder or holders of any mortgages or deeds of trust covering the Premises or the Project, the damage shall be repaired by Landlord (exclusive of Tenant's furniture, furnishings, trade fixtures or equipment) to the extent such insurance proceeds are available therefor and provided such repairs can, in Landlord's sole opinion, be completed within two hundred seventy (270) days after the necessity for repairs as a result of such damage becomes known to Landlord, without the payment of overtime or other premiums, and until such repairs are completed rent shall be abated in proportion to the part of the Premises which is unusable by Tenant in the conduct of its business (but there shall be no abatement of rent by reason of any portion of the Premises being unusable for a period equal to one (1) day or less). However, if the damage is due to the fault or neglect of Tenant, its employees, agents, contractors, guests, invitees and the like, there shall be no abatement of rent, unless and to the extent Landlord receives rental income insurance proceeds. Upon the occurrence of any damage to the Premises, Tenant shall assign to Landlord (or to any party designated by Landlord) all insurance proceeds payable to Tenant under Section 14(a)(iii)(A) above for the Tenant Insured Property (exclusive of Tenant's furniture, furnishings, trade fixtures or equipment); provided, however, that if the cost of repair of the Tenant Insured Property within the Premises by Landlord exceeds the amount of insurance proceeds received by Landlord from Tenant's insurance carrier, as so assigned by Tenant, such excess costs shall be paid by Tenant to Landlord prior to Landlord's repair of such damage. If repairs cannot, in Landlord's opinion, be completed within two hundred seventy (270) days after the necessity for repairs as a result of such damage becomes known to Landlord without the payment of overtime or other premiums, Landlord may, at its option, either (i) make such repairs in a reasonable time and in such event this Lease shall continue in effect and the rent shall be abated, if at all, in the manner provided in this Article 16, or (ii) elect not to effect such repairs and instead terminate this Lease, by notifying Tenant in writing of such termination within sixty (60) days after Landlord learns of the necessity for repairs as a result of damage, such notice to include a termination date giving Tenant sixty (60) days to vacate the Premises. In addition, Landlord may elect to terminate this Lease if the Project shall be damaged by fire or other casualty or cause, whether or not the Premises are affected, if the damage is not fully covered, except for deductible amounts, by Landlord's insurance policies. Finally, if the Premises or the Project is damaged to any substantial extent during the last twelve (12) months of the Term, then notwithstanding anything contained in this Article 16 to the contrary, Landlord shall have the option to terminate this Lease by giving written notice to Tenant of the exercise of such option within sixty (60) days after Landlord learns of the necessity for repairs as the result of such damage. In no event shall a closure of the Project to protect public health constitute damage as used in this Article 16, and a casualty shall only be deemed to occur where the physical or structural integrity of the Premises or the Project is directly damaged or degraded. In addition, a casualty shall not be deemed to occur merely because Tenant, or any other tenant of the Project, cannot productively use the Premises, or other premises of the Project, respectively, that otherwise remains physically usable. Except as provided in this Article 16, there shall be no abatement of rent and no liability of Landlord by reason of any injury to or interference with Tenant's business or property arising from such damage or destruction or the making of any repairs, alterations or improvements in or to any portion of the Project or the Premises or in or to fixtures, appurtenances and equipment therein. Tenant understands that Landlord will not carry insurance of any kind on Tenant's furniture, furnishings, trade fixtures or equipment, and that Landlord shall not be obligated to repair any damage thereto or replace the same. Tenant acknowledges that Tenant shall have no right to any proceeds of insurance carried by Landlord relating to property damage. With respect to any damage which Landlord is obligated to repair or elects to repair, Tenant, as a material inducement to Landlord entering into this Lease, irrevocably waives and releases its rights under any present or future Law that purports to govern the rights of Landlord and Tenant in such circumstances in the absence of express agreement is hereby waived by the parties and shall have no application.

If the Building is damaged by fire or casualty, and either (i) such fire or casualty damages to the Premises or renders the Premises inaccessible, as the case may be, and such damage cannot, in the ordinary course, reasonably be expected to be repaired within one (1) year after the date of such casualty as reasonably determined by Landlord's contractor, or (ii) if such casualty materially affects the Premises and occurs during the last Lease Year of the Term (as it may have been extended), and such fire or casualty damage to the Premises cannot reasonably be expected to be repaired or restored within ninety (90) days from the date of the casualty, then Tenant shall have the right, by giving notice to Landlord not later than forty-five (45) days after Tenant receives a written notice from Landlord estimating the time to repair such damage, to terminate this Lease, whereupon this Lease shall terminate as of the date of such notice with the same force and effect as if such date were the date originally established as the expiration date hereof.

ARTICLE 17
SUBORDINATION

This Lease is subject and subordinate to all existing and future ground or underlying leases, mortgages and deeds of trust which affect the Real Property, including all renewals, modifications, consolidations, replacements and extensions thereof; provided, however, if the lessor under any such lease or the holder or holders of any such mortgage or deed of trust shall advise Landlord that they desire or require this Lease to be prior and superior thereto, upon written request of Landlord to Tenant, Tenant agrees to promptly execute, acknowledge and deliver any and all documents or instruments which Landlord or such lessor, holder or holders deem necessary or desirable for purposes thereof. Tenant agrees that in the event any proceedings are brought for the foreclosure of any mortgage or deed of trust or any deed in lieu thereof, to attorn to the mortgagee under such mortgage or deed of trust, such mortgagee's successor purchaser or any of their successors or assigns upon any such foreclosure sale or deed in lieu thereof as so requested to do so by such purchaser and to recognize such purchaser as the lessor under this Lease; provided, however, that, subject to the following sentence, such mortgagee or its successor shall not be liable for or bound by (i) any payment of any rent installment which may have been made more than thirty (30) days before the due date of such installment, (ii) any act or omission of or default by Landlord under this Lease (but such mortgagee, or such successor, shall be subject to the continuing obligations of Landlord under this Lease to the extent arising from and after such succession to the extent of such mortgagee's or such successor's interest in the Project), (iii) any credit, claims, setoffs or defenses which Tenant may have against Landlord, (iv) any modification or amendment to this Lease for which such mortgagee's consent is required, but has not been obtained, under a mortgage or deed of trust or (v) any obligation under this Lease to maintain a fitness facility at the Project, if any. Tenant, upon the reasonable request by such mortgagee or such successor in interest, shall execute and deliver within fifteen (15) business days of such request an instrument or instruments confirming such attornment. Tenant agrees to provide copies of any notices of Landlord's default under this Lease to any mortgagee, deed of trust beneficiary and mezzanine lender whose address has been provided to Tenant in advance and Tenant shall provide such mortgagee, deed of trust beneficiary and mezzanine lender a commercially reasonable time after receipt of such notice within which to cure any such default. Tenant waives the provisions of any current or future statute, rule or law which may give or purport to give Tenant any right or election to terminate or otherwise adversely affect this Lease and the obligations of the Tenant hereunder in the event of any foreclosure proceeding or sale. As a condition precedent to the future subordination of this Lease to a future mortgage or deed of trust, Landlord shall be required to provide Tenant with a non-disturbance, subordination, and attornment agreement (an "**SNDA**") in favor of Tenant from any mortgagee or beneficiary who comes into existence after the Effective Date on the mortgagee's standard form of SNDA provided such form contains commercially reasonable terms and conditions, including a provision that, so long as Tenant is paying the rent due under this Lease and is not otherwise in default under this Lease beyond any applicable cure period, its right to possession and the other terms of the Lease shall remain in full force and effect. Landlord represents that, as of the date of this Lease, there is no mortgage or deed of trust encumbering the Project.

ARTICLE 18
EMINENT DOMAIN

If the whole of the Premises or the Project or so much thereof as to render the balance unusable by Tenant shall be taken under power of eminent domain, or is sold, transferred or conveyed in lieu thereof, this Lease shall automatically terminate as of the date of such condemnation, or as of the date possession is taken by the condemning authority, at Landlord's option. No award for any partial or entire taking shall be apportioned, and Tenant hereby assigns to Landlord any award which may be made in such taking or condemnation, together with any and all rights of Tenant now or hereafter arising in or to the same or any part thereof; provided, however, that nothing contained herein shall be deemed to give Landlord any interest in or to require Tenant to assign to Landlord any award made to Tenant for the taking of personal property and trade fixtures belonging to Tenant and removable by Tenant at the expiration of the Term hereof as provided hereunder or for the interruption of, or damage to, Tenant's business. In the event of a partial taking described in this Article 18, or a sale, transfer or conveyance in lieu thereof, which does not result in a termination of this Lease, the rent shall be apportioned according to the ratio that the part of the Premises remaining useable by Tenant bears to the total area of the Premises. Any governmental action requiring businesses to close temporarily shall not be considered a condemnation or eminent domain hereunder, and any governmental action for the purpose of protecting public safety (*e.g.*, to protect against acts of war, the spread of communicable diseases, or an infestation) shall not be considered a temporary taking for "public use" entitling Tenant to any government compensation, rental abatement or other remedy. Tenant, hereby irrevocably waives and releases its rights under any present Law that purports to govern the rights of Landlord and Tenant in such circumstances in the absence of express agreement is hereby waived by the parties and shall have no application.

ARTICLE 19
DEFAULT

Each of the following acts or omissions of Tenant or of any guarantor of Tenant's performance hereunder, or occurrences, shall constitute an "**Event of Default**":

(a) Failure or refusal to pay Basic Rental, Additional Rent or any other amount to be paid by Tenant to Landlord hereunder within five (5) calendar days after written notice from Landlord that the same is past due;

(b) Except as set forth in items (a) above and (c) through and including (g) below, failure to perform or observe any other covenant or condition of this Lease to be performed or observed within thirty (30) days following written notice to Tenant of such failure, provided, however, that if such cure cannot reasonably be effected within such thirty (30) day period and Tenant begins such cure promptly within such thirty (30) day period and is pursuing such cure in good faith and with diligence and continuity during such thirty (30) day period, then, except in the event of an emergency, Tenant shall have such additional time as is reasonably necessary (not to exceed ninety (90) days in the aggregate) to effect such cure;

(c) Intentionally omitted;

(d) The taking in execution or by similar process or law (other than by eminent domain) of the estate hereby created;

(e) The filing by Tenant or any guarantor hereunder in any court pursuant to any statute of a petition in bankruptcy or insolvency or for reorganization or arrangement for the appointment of a receiver of all or a portion of Tenant's property; the filing against Tenant or any guarantor hereunder of any such petition, or the commencement of a proceeding for the appointment of a trustee, receiver or liquidator for Tenant, or for any guarantor hereunder, or of any of the property of either, or a proceeding by any governmental authority for the dissolution or liquidation of Tenant or any guarantor hereunder, if such proceeding shall not be dismissed or trusteeship discontinued within sixty (60) days after commencement of such proceeding or the appointment of such trustee or receiver; or the making by Tenant or any guarantor hereunder of an assignment for the benefit of creditors. Tenant hereby stipulates to the lifting of the automatic stay in effect and relief from such stay for Landlord in the event Tenant files a petition under the United States Bankruptcy laws, for the purpose of Landlord pursuing its rights and remedies against Tenant and/or a guarantor of this Lease;

(f) Tenant's failure to cause to be released any mechanics liens filed against the Premises or the Project within thirty (30) days after the date the same shall have been filed or recorded; or

(g) Tenant's failure to maintain the insurance coverages required under the provisions of Article 14 or to observe or perform its obligations under the provisions of Article 17 or 25 of this Lease and such failure is not cured within five (5) business days after written notice from Landlord.

All defaults by Tenant of any covenant or condition of this Lease shall be deemed by the parties hereto to be material.

ARTICLE 20
REMEDIES

(a) Upon the occurrence of an Event of Default under this Lease as provided in Article 19 hereof, Landlord may exercise all of its remedies as may be permitted by law, including without limitation, terminating this Lease, reentering the Premises and removing all persons and property therefrom, which property may be stored by Landlord at a warehouse or elsewhere at the risk, expense and for the account of Tenant. If Landlord elects to terminate this Lease, Landlord shall be entitled to recover from Tenant the aggregate of all amounts permitted by law, including but not limited to the sum of (i) the worth at the time of award of any unpaid Rent that had accrued at the time of such termination; plus (ii) the costs of restoring the Premises to the condition required under the terms of this Lease; plus, (iii) an amount (the "**Election Amount**") equal to the positive difference (if any, and measured at the time of such termination) between (1) the then-present value of the total Rent and other benefits that would have accrued to Landlord under this Lease for the remainder of the Term if Tenant had fully complied with the Lease minus (2) the then-present fair market rental value of the Premises as reasonably determined by Landlord for what would be the then-unexpired Term if the Lease remained in effect, computed using the discount rate of the Federal Reserve Bank of Boston at the time of the award plus one (1) percentage point. Landlord and Tenant agree that the Election Amount represents a reasonable forecast of the minimum damages expected to occur in the event of a breach, taking into account the uncertainty, time and cost of determining elements relevant to actual damages, such as fair market rent, time and costs that may be required to re-lease the Premises, and other factors; and that the Election Amount is not a penalty. As used in item (i), above, the "worth at the time of award" shall be computed by allowing interest at the rate set forth in Section 30(e), below, but in no case greater than the maximum amount of such interest permitted by law.

(b) Nothing in this Article 20 shall be deemed to affect Landlord's right to indemnification for liability or liabilities arising prior to the termination of this Lease for personal injuries or property damage under the indemnification clause or clauses contained in this Lease.

(c) Notwithstanding anything to the contrary set forth herein, Landlord's re-entry to perform acts of maintenance or preservation of or in connection with efforts to relet the Premises or any portion thereof, or the appointment of a receiver upon Landlord's initiative to protect Landlord's interest under this Lease shall not terminate Tenant's right to possession of the Premises or any portion thereof and, until Landlord does elect to terminate this Lease, this Lease shall continue in full force and effect and Landlord may enforce all of Landlord's rights and remedies hereunder. Accordingly, if Landlord does not elect to terminate this Lease on account of any default by Tenant (beyond applicable notice and cure periods), Landlord may, from time to time, without terminating this Lease, enforce all of its rights and remedies under this Lease, including the right to recover all rent as it becomes due.

(d) All rights, powers and remedies of Landlord hereunder and under any other agreement now or hereafter in force between Landlord and Tenant shall be cumulative and not alternative and shall be in addition to all rights, powers and remedies given to Landlord by law, and the exercise of one or more rights or remedies shall not impair Landlord's right to exercise any other right or remedy. In addition, in the event of any eviction moratorium, to the extent otherwise allowed by law, Landlord may keep this Lease in effect and sue for rent damages (including suing guarantors) and otherwise exercise Landlord's rights and remedies under this Lease including, without limitation, Landlord's right to apply or draw upon any security deposit, letter of credit or other security enhancements. Tenant hereby expressly waives any and all rights of redemption granted by or under any present laws in the event of Tenant being evicted or dispossessed, or in the event of Landlord obtaining possession of the Premises, by reason of the violation by Tenant of any of the covenants and conditions of this Lease.

(e) Any amount due from Tenant to Landlord hereunder which is not paid when due shall bear interest at the lower of twelve percent (12%) per annum or the maximum lawful rate of interest from the due date until paid, unless otherwise specifically provided herein, but the payment of such interest shall not excuse or cure any default by Tenant under this Lease. In addition to such interest: (i) if Basic Rental is not paid on or before the fifth (5th) day of the calendar month for which the same is due, a late charge equal to five percent (5%) of the amount overdue shall be immediately due and owing and shall accrue for each calendar month or part thereof until such rental, including the late charge, is paid in full, which late charge Tenant hereby agrees is a reasonable estimate of the damages Landlord shall suffer as a result of Tenant's late payment; provided, however, Landlord shall waive such late charge for the first late payment in any twelve (12) month period so long as Tenant shall pay such late payment within five (5) days following Landlord's written notice to Tenant of the occurrence of such late payment; and (ii) an additional charge of $25 shall be assessed for any check given to Landlord by or on behalf of Tenant which is not honored by the drawee thereof; which damages include Landlord's additional administrative and other costs associated with such late payment and unsatisfied checks and the parties agree that it would be impracticable or extremely difficult to fix Landlord's actual damage in such event. Such charges for interest and late payments and unsatisfied checks are separate and cumulative and are in addition to and shall not diminish or represent a substitute for any or all of Landlord's rights or remedies under any other provision of this Lease.

(f) In the event of any default, breach or violation of Tenant's rights under this Lease by Landlord, Tenant's exclusive remedies shall be an action for specific performance or action for actual damages. Without limiting any other waiver by Tenant which may be contained in this Lease, Tenant hereby waives the benefit of any law granting it the right to perform Landlord's obligation, or the right to terminate this Lease on account of any Landlord default.

ARTICLE 21
TRANSFER OF LANDLORD'S INTEREST

In the event of any transfer of Landlord's interest in the Premises or the Project by sale, assignment, transfer, foreclosure, deed-in-lieu of foreclosure or otherwise whether voluntary or involuntary, Landlord shall be automatically relieved of any and all obligations and liabilities on the part of Landlord from and after the date of such transfer, including furthermore without limitation, the obligation of Landlord under Article 4 above to return the security deposit, provided said security deposit is transferred to said transferee. Tenant agrees to attorn to the transferee upon any such transfer and to recognize such transferee as the lessor under this Lease and Tenant shall, within fifteen (15) days after request, execute such further instruments or assurances as such transferee may reasonably deem necessary to evidence or confirm such attornment.

ARTICLE 22
BROKER

In connection with this Lease, Tenant warrants and represents that it has had dealings only with the Brokers set forth in Section 1.H. of the Basic Lease Provisions and that it knows of no other person or entity who is or might be entitled to a commission, finder's fee or other like payment in connection herewith and does hereby indemnify and agree to hold Landlord harmless from and against any and all loss, liability and expenses that Landlord may incur should such warranty and representation prove incorrect, inaccurate or false. Landlord warrants and represents that it has had dealings only with the Brokers and that it knows of no other person or entity who is or might be entitled to a commission, finder's fee or other like payment in connection herewith and does hereby indemnify and agree to hold Tenant harmless from and against any and all loss, liability and expenses that Tenant may incur should such warranty and representation prove incorrect, inaccurate or false. Landlord shall be solely responsible for the payment of any brokerage commissions to the Brokers pursuant to separate agreement(s) between Landlord and the Brokers.

ARTICLE 23
PARKING

Beginning on the Commencement Date and continuing throughout the Term of this Lease, Tenant shall have the right to use, on a non-exclusive, unreserved, first-come, first-serve basis, the number of parking spaces set forth in Section 1.I. of the Basic Lease Provisions, at no additional cost (except for Tenant's Proportionate Share of Operating Costs). Tenant agrees not to overburden the parking areas and agrees to cooperate with Landlord and other tenants in the use of parking facilities. Landlord may designate parking facilities at the Project for the handicapped and visitors to the Project. Landlord may install signage or implement a pass or sticker system to control parking use, and may employ valet parking (including by use of off-site premises) to meet the requirements of this Section. To the extent applicable to Tenant's use of the parking spaces, the provisions of this Lease shall apply, and Landlord may promulgate reasonable rules and regulations of general applicability from time to time with respect to such use. Landlord assumes no responsibility whatsoever for loss or damage due to fire, theft or otherwise to any automobile(s) parked in the parking facilities or to any personal property therein, however caused, and Tenant agrees, upon request from Landlord from time to time, to notify its officers, employees, agents and invitees of such limitation of liability. Tenant's continued right to use the parking passes is conditioned upon Tenant abiding by all reasonable rules and regulations which are prescribed from time to time for the orderly operation and use of the parking facility where the parking passes are located, including any sticker or other identification system established by Landlord, Tenant's cooperation in seeing that Tenant's employees and visitors also comply with such rules and regulations, and Tenant not being in default under this Lease (beyond applicable notice and cure periods). Landlord specifically reserves the right to (i) designate certain areas of the parking facility as reserved for certain occupants or visitors, or (ii) change the size, configuration, design, layout and all other aspects of the Project parking facility at any time and Tenant acknowledges and agrees that Landlord may, without incurring any liability to Tenant and without any abatement of rent under this Lease, from time to time, temporarily close-off or restrict access to the Project parking facility for purposes of permitting or facilitating any such construction, alteration or improvements. Landlord may delegate its responsibilities hereunder to a parking operator or a lessee of the parking facility in which case such parking operator or lessee shall have all the rights of control attributed hereby to the Landlord. The parking passes are provided to Tenant solely for use by Tenant's own personnel and such passes may not be transferred, assigned, subleased or otherwise alienated by Tenant without Landlord's prior approval, except in connection with a Transfer pursuant to Article 14 above.

ARTICLE 24
WAIVER

No waiver by Landlord of any provision of this Lease shall be deemed to be a waiver of any other provision hereof or of any subsequent breach by Tenant of the same or any other provision. No provision of this Lease may be waived by Landlord, except by an instrument in writing executed by Landlord. Landlord's consent to or approval of any act by Tenant requiring Landlord's consent or approval shall not be deemed to render unnecessary the obtaining of Landlord's consent to or approval of any subsequent act of Tenant, whether or not similar to the

act so consented to or approved. No act or thing done by Landlord or Landlord's agents during the Term of this Lease shall be deemed an acceptance of a surrender of the Premises, and no agreement to accept such surrender shall be valid unless in writing and signed by Landlord. The subsequent acceptance of rent hereunder by Landlord shall not be deemed to be a waiver of any preceding breach by Tenant of any term, covenant or condition of this Lease, other than the failure of Tenant to pay the particular rent so accepted, regardless of Landlord's knowledge of such preceding breach at the time of acceptance of such rent. Any payment by Tenant or receipt by Landlord of an amount less than the total amount then due hereunder shall be deemed to be in partial payment only thereof and not a waiver of the balance due or an accord and satisfaction, notwithstanding any statement or endorsement to the contrary on any check or any other instrument delivered concurrently therewith or in reference thereto. Accordingly, Landlord may accept any such amount and negotiate any such check without prejudice to Landlord's right to recover all balances due and owing and to pursue its other rights against Tenant under this Lease, regardless of whether Landlord makes any notation on such instrument of payment or otherwise notifies Tenant that such acceptance or negotiation is without prejudice to Landlord's rights.

ARTICLE 25
ESTOPPEL CERTIFICATE

Tenant shall, at any time and from time to time, upon not less than ten (10) business days' prior written notice from Landlord, execute, acknowledge and deliver to Landlord a statement in writing certifying the following information, (but not limited to the following information in the event further information is requested by Landlord): (i) that this Lease is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying that this Lease, as modified, is in full force and effect); (ii) the dates to which the rental and other charges are paid in advance, if any; (iii) the amount of Tenant's security deposit, if any; and (iv) acknowledging that there are not, to Tenant's knowledge, any uncured defaults on the part of Landlord hereunder, and no events or conditions then in existence which, with the passage of time or notice or both, would constitute a default on the part of Landlord hereunder, or specifying such defaults, events or conditions, if any are claimed. It is expressly understood and agreed that any such statement may be relied upon by any prospective purchaser or encumbrancer of all or any portion of the Real Property. Tenant's failure to deliver such statement within such time shall constitute an admission by Tenant that all statements contained therein are true and correct. Furthermore, if Tenant fails to timely deliver an estoppel certificate to Landlord pursuant to the terms of this Article 25, then without limiting any other rights and remedies of Landlord, Landlord shall have the right to charge Tenant an amount equal to $250 per day for each day thereafter until Tenant delivers to Landlord an estoppel certificate pursuant to the terms hereof. Tenant acknowledges and agrees that (A) such charge compensates Landlord for the administrative costs caused by the delinquency, and (B) Landlord's damage would be difficult to compute and the amount stated above represents a reasonable estimate of such damage.

ARTICLE 26
LIABILITY OF LANDLORD

Notwithstanding anything in this Lease to the contrary, any remedy of Tenant for the collection of a judgment (or other judicial process) requiring the payment of money by Landlord in the event of any default by Landlord hereunder or any claim, cause of action or obligation, contractual, statutory or otherwise by Tenant against Landlord or the Landlord Parties concerning, arising out of or relating to any matter relating to this Lease and all of the covenants and conditions or any obligations, contractual, statutory, or otherwise set forth herein, shall be limited solely and exclusively to an amount which is equal to the then equity interest of Landlord in and to the Project. No other property or assets of Landlord or any Landlord Party shall be subject to levy, execution or other enforcement procedure for the satisfaction of Tenant's remedies under or with respect to this Lease, Landlord's obligations to Tenant, whether contractual, statutory or otherwise, the relationship of Landlord and Tenant hereunder, or Tenant's use or occupancy of the Premises. In no event shall Landlord ever be liable to Tenant or any of the Tenant Parties for any loss of business, lost profit or any other indirect or consequential damages suffered by Tenant or any of the Tenant Parties from any cause whatsoever.

ARTICLE 27
INABILITY TO PERFORM

This Lease and the obligations of Landlord and Tenant hereunder shall not be affected or impaired because a party is prevented from fulfilling any of its obligations hereunder or is delayed in doing so, if such inability or delay is caused by reason of any prevention, delay, stoppage due to strikes, lockouts, acts of God, terrorism (or credible threat thereof), fire, earthquake, floods, hurricanes, tornadoes, explosion, action of the natural elements, war, hostilities, invasion, insurrection, riot, mob violence, sabotage, epidemic or pandemic (or credible threat thereof), eviction moratoria, public health emergencies, permitting delays by governmental agencies, inspection delays by governmental agencies, inability to procure or general shortage of labor, equipment, facilities, materials or supplies, failure of transportation, action of labor unions, condemnation, requisition, laws, orders of government or civil or military or naval authorities, or evacuation or, whether similar or dissimilar to the foregoing, any other cause previously, or at such time, beyond the reasonable control of the performing or obligated party (collectively, a "**Force Majeure**") and the time for performance of Landlord's and Tenant's obligations (excluding any monetary payments, such as, by way of example only, Basic Rental and the Allowance and Tenant's obligation to vacate and surrender the Premises upon expiration or earlier termination of this Lease) under this Lease, including all Exhibits, shall be suspended for the period of such delay or prevention and extended for a period equal to the period of such delay or prevention. For the avoidance of doubt, no Force Majeure event shall delay or excuse the timely payment of any items of Rent or other sums due under this Lease by Tenant or Landlord and financial disability or hardship shall never constitute a Force Majeure event.

ARTICLE 28
HAZARDOUS WASTE

(a) Except for those chemicals or materials, and their respective quantities, specifically listed on the Environmental Questionnaire (defined in Section 28(f) below), Tenant shall not cause or permit any Hazardous Material (as defined in Section 28(d) below) to be brought, kept, produced, generated, stored, manufactured, blended, handled, recycled, Released (as such term is defined below) or used in or about the Project by Tenant or any of the Tenant Parties. For purposes of this Article 28, references to "Tenant" shall include all of the Tenant Parties. Tenant indemnifies Landlord and the Landlord Parties from and against any breach by Tenant of the obligations stated in the preceding sentence, and from Tenant's use, storage and/or disposal of any "medical or biological waste," or other waste as provided in Section 28(d)(ix) below, and agrees to defend and hold Landlord and the Landlord Parties harmless from and against any and all claims, judgments, damages, penalties, fines, costs, liabilities, or losses (including, without limitation, diminution in value of the Project, damages for the loss or restriction or use of rentable or usable space or of any amenity of the Project, damages arising from any adverse impact or marketing of space in the Project, and sums paid in settlement of claims, reasonable attorneys' fees and costs, reasonable consultant fees, and reasonable expert fees) which arise during or after the Term of this Lease as a result of such breach. This indemnification of Landlord and the Landlord Parties by Tenant includes, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal, or restoration work required by any federal, state, or local governmental agency or political subdivision because of Hazardous Material present in the soil or ground water on or under the Project resulting from a breach by Tenant of this Article 28. Without limiting the foregoing, if the presence of any Hazardous Material on the Project caused or permitted by Tenant results in any contamination of the Project, then subject to the provisions of Articles 9, 10 and 11 hereof and Section 28(k) below, Tenant shall promptly take all actions at its sole expense as are necessary to return the Project to the condition existing prior to the introduction of any such Hazardous Material and the contractors to be used by Tenant for such work must be approved by Landlord, which approval shall not be unreasonably withheld so long as such actions would not potentially have any material adverse long-term or short-term effect on the Project and so long as such actions do not materially interfere with the use and enjoyment of the Project by the other tenants thereof; provided however, Landlord shall also have the right, by written notice to Tenant, to directly undertake any such mitigation efforts with regard to Hazardous Material in or about the Project due to Tenant's breach of its obligations pursuant to this Section 28(a), and to charge Tenant, as Additional Rent, for the costs thereof. For purposes of this Lease, "**Release**" or "**Released**" or "**Releases**" shall mean any release, deposit, discharge, emission, leaking, spilling,

seeping, migrating, injecting, pumping, pouring, emptying, escaping, dumping, disposing, or other movement of Hazardous Material into the environment. As defined in Environmental Laws, Tenant is and shall be deemed to be the "**operator**" of Tenant's "**facility**" and the "**owner**" of all Hazardous Material brought on the Premises or the Project by Tenant and the wastes, by-products, or residues generated, resulting, or produced therefrom.

(b) Landlord and Tenant acknowledge that Landlord may become legally liable for the costs of complying with Laws (as defined in Section 28(e) below) relating to Hazardous Material which are not the responsibility of Landlord or the responsibility of Tenant, including the following: (i) change in Laws which relate to Hazardous Material which make that Hazardous Material which is present on the Real Property as of the effective date of this Lease, whether known or unknown to Landlord, a violation of such new Laws; (ii) Hazardous Material that migrates, flows, percolates, diffuses, or in any way moves on to, or under, the Project after the effective date of this Lease; or (iii) Hazardous Material present on or under the Project as a result of any discharge, dumping or spilling (whether accidental or otherwise) on the Project by other lessees of the Project or their agents, employees, contractors, or invitees, or by others. Accordingly, Landlord and Tenant agree that the cost of complying with Laws relating to Hazardous Material on the Project for which Landlord is legally liable and which are paid or incurred by Landlord shall be an Operating Cost (and Tenant shall pay Tenant's Proportionate Share thereof in accordance with Article 3) unless the cost of such compliance as between Landlord and Tenant, is made the responsibility of Tenant pursuant to Section 28(a) above. To the extent any such Operating Cost relating to Hazardous Material is subsequently recovered or reimbursed through insurance, or recovery from responsible third parties or other action, Tenant shall be entitled to a proportionate reimbursement to the extent it has paid its share of such Operating Cost to which such recovery or reimbursement relates.

(c) It shall not be unreasonable for Landlord to withhold its consent to any proposed Transfer if (i) the proposed transferee's anticipated use of the Premises involves a material change or increase in the generation, storage, use, treatment, or disposal of Hazardous Materials; (ii) the proposed Transferee has been required by any prior landlord, lender, or governmental authority to take remedial action in connection with Hazardous Material contaminating a property if the contamination resulted from such Transferee's actions or use of the property in question; or (iii) the proposed Transferee is subject to an enforcement order issued by any governmental authority in connection with the use, disposal, or storage of a Hazardous Material.

(d) As used herein, the term "**Hazardous Material**" means any hazardous or toxic substance, material, or waste which is or becomes regulated by any local governmental authority, the Commonwealth of Massachusetts or the United States Government. The term "Hazardous Material" includes, without limitation, any material or substance which is (i) defined as "Hazardous waste" under Section 2 of M.G.L. c. 21C (Massachusetts Hazardous Waste Management Act), (ii) defined as a "Hazardous material," "Oil" or "Substantial hazard" under Section 2 of M.G.L. c. 21E (Massachusetts Oil and Hazardous Material Release Prevention Act), (iii) defined as "Acutely Hazardous Waste," "Hazardous Waste," "Hazardous Debris," "Mixed Waste" or "Universal Waste" under 310 Code of Massachusetts Regulations, §§ 30.000 et. Seq (Hazardous Waste), (iv) petroleum, (v) asbestos, (vi) designated as a "Hazardous Substance" pursuant to Section 311 of the Federal Water Pollution Control Act (33 U.S.C. §1317), (vii) defined as a "Hazardous Waste" pursuant to Section 1004 of the Federal Resource Conservation and Recovery Act, 42 U.S.C. §6901 et seq. (42 U.S.C. §6903), or (viii) defined as a "Hazardous Substance" pursuant to Section 101 of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §9601 et seq. (42 U.S.C. §9601), (ix) defined as a "medical or biological waste," "unprocessed liquid pathological waste," other waste under 105 Code of Massachusetts Regulations, §§ 480.000 et. Seq (Minimum Requirements for the Management of Medical or Biological Waste); provided, however, that Tenant shall be authorized to use and/or store such waste described in this Section (d)(ix) in such amounts as are reasonably necessary for the operation of Tenant's medical practice, but Tenant shall be solely responsible, at its sole cost and expense, for the lawful disposal of such medical waste, subject to the indemnification provision of Section 28(a) hereof.

(e) As used herein, the term "**Environmental Laws**" means any applicable federal, state or local law, ordinance, or regulation relating to any Hazardous Material affecting the Project, including, without limitation, the laws, ordinances, and regulations referred to in Section 28(d) above.

(f) Landlord acknowledges that it is not the intent of this Article 28 to prohibit Tenant from operating in the Premises for the Permitted Use consistent with the terms of this Lease. Tenant may operate its business according to the custom of the industry so long as the use or presence of any Hazardous Material is strictly and properly monitored and accomplished according to all applicable Laws. In all events Tenant shall comply with all applicable provisions of the standards of the U.S. Department of Health and Human Services as further described in the USDHHS publication Biosafety in Microbiological and Biomedical Laboratories (5th Edition) as it may be further revised, or such nationally recognized new or replacement standards as may be reasonably selected by Landlord. As a material inducement to Landlord to allow Tenant to use Hazardous Material in connection with its business, Tenant agrees to deliver to Landlord prior to the date Tenant commences business in the Premises a fully and accurately completed Landlord's Pre-Leasing Environmental Exposure Questionnaire identifying each type of Hazardous Material to be present on the Premises and setting forth any and all governmental approvals or permits required in connection with the presence of such Hazardous Material on the Premises ("**Environmental Questionnaire**") in the form of **Exhibit "F"** attached hereto. Tenant shall deliver to Landlord an updated Environmental Questionnaire at least once each calendar year and shall also deliver an updated Environmental Questionnaire before any new Hazardous Material is brought onto the Premises or on or before the date Tenant obtains any additional permits or approvals for Hazardous Material. If any information provided to Landlord by Tenant on an Environmental Questionnaire, or otherwise relating to information concerning Hazardous Material is false, intentionally incomplete, or misleading in any material respect, the same shall be deemed an Event of Default by Tenant under this Lease. Landlord's prior written consent shall be required with respect to any Hazardous Material used for the Premises not described on the initial Environmental Questionnaire, which consent may be withheld in Landlord's sole discretion. All manifests relating to the storage and/or removal or transportation of Hazardous Material shall belong solely to Tenant and Landlord shall have absolutely no obligation in connection therewith. Tenant shall at all times throughout the Term, maintain a contract with a reputable hazardous materials transportation company for the containment, removal and transportation of any Hazardous Material. Tenant shall not install or permit any underground storage tank at the Premises or the Project. Landlord shall have the right to terminate this Lease in Landlord's sole and absolute discretion in the event that (i) any anticipated use of the Premises by Tenant involves the generation or storage, use, treatment or disposal of Hazardous Material in a manner or for a purpose prohibited by any governmental agency or authority; (ii) Tenant has been required by any lender or governmental authority to take remedial action in connection with Hazardous Material contaminating the Premises if the contamination resulted from Tenant's actions or use of the Premises (unless Tenant is diligently seeking compliance with such remedial action); or (iii) Tenant is subject to an enforcement order issued by any governmental authority in connection with the use, disposal or storage of a Hazardous Material on the Premises (unless Tenant is diligently seeking compliance with such enforcement order). At any time prior to the expiration of the Term and upon Landlord's reasonable belief that certain Hazardous Material tests are advisable, Landlord shall have the right following notice (except in the event of an emergency) to enter upon the Premises in accordance with Section 12(a) in order to conduct appropriate tests and to deliver to Tenant the results of such tests to attempt to demonstrate that contamination has occurred as a result of Tenant's use of the Premises.

(g) Tenant shall notify Landlord in writing as soon as possible but in no event later than five (5) days after (i) Tenant becomes aware of the occurrence of any actual, alleged or threatened Release of any Hazardous Material in, on, under, from, about or in the vicinity of the Premises or the Project (whether past or present), regardless of the source or quantity of any such Release, or (ii) Tenant becomes aware of any regulatory actions, inquiries, inspections, investigations, directives, or any cleanup, compliance, enforcement or abatement proceedings (including any threatened or contemplated investigations or proceedings) relating to or potentially affecting the Premises or the Project, or (iii) Tenant becomes aware of any claims by any person or entity relating to any Hazardous Material in, on, under, from, about or in the vicinity of the Premises or the Project, whether relating to damage, contribution, cost recovery, compensation,

loss or injury. Collectively, the matters set forth in clauses (i), (ii) and (iii) above are hereinafter referred to as "**Hazardous Materials Claims**". Tenant shall promptly forward to Landlord copies of all orders, notices, permits, applications and other communications and reports received by Tenant in connection with any Hazardous Materials Claims. Additionally, Tenant shall promptly advise Landlord in writing of Tenant's discovery of any occurrence or condition on, in, under or about the Premises or the Project that could subject Tenant or Landlord to any liability, or restrictions on ownership, occupancy, transferability or use of the Premises or the Project under any Laws. Tenant shall not enter into any legal proceeding or other action, settlement, consent decree or other compromise with respect to any Hazardous Materials Claims without first notifying Landlord of Tenant's intention to do so and affording Landlord the opportunity to join and participate, as a party if Landlord so elects, in such proceedings and in no event shall Tenant enter into any agreements which are binding on Landlord, the Premises or the Project without Landlord's prior written consent. Landlord shall have the right to appear at and participate in, any and all legal or other administrative proceedings concerning any Hazardous Materials Claim.

(h) Without limiting the generality of Tenant's obligation to comply with applicable Laws as otherwise provided in this Lease, Tenant shall, at its sole cost and expense, comply with all Environmental Laws. Tenant shall obtain and maintain any and all necessary permits, licenses, certifications and approvals appropriate or required for the use, handling, storage, and disposal of any Hazardous Material used, stored, generated, transported, handled, blended, or recycled by Tenant on the Premises. Landlord shall have a continuing right, without obligation, to require Tenant to obtain, and to review and inspect any and all such permits, licenses, certifications and approvals, together with copies of any and all Hazardous Material management plans and programs, any and all Hazardous Material risk management and pollution prevention programs, and any and all Hazardous Material emergency response and employee training programs respecting Tenant's use of Hazardous Material. Upon request of Landlord, Tenant shall deliver to Landlord a narrative description explaining the nature and scope of Tenant's activities involving Hazardous Material and showing to Landlord's satisfaction compliance with all Laws and the terms of this Lease. Landlord shall keep any non-public information provided by Tenant pursuant to the preceding sentence confidential, and shall not disclose the same other than (i) on a need to know basis to Landlord, its existing and prospective investors, purchasers, lenders, and their respective officers, employees and consultants, all of whom shall be instructed to keep such information confidential, (ii) to the extent required by applicable Laws or by any administrative, governmental or judicial proceeding, or (iii) in connection with a dispute between Landlord and Tenant.

(i) Landlord may, but shall not be required to, engage from time to time such contractors as Landlord determines to be appropriate to perform environmental assessments of a scope reasonably determined by Landlord, including without limitation, a Phase I Environmental Site Assessment (an "**Environmental Assessment**") to ensure Tenant's compliance with the requirements of this Lease with respect to Hazardous Material. All costs and expenses incurred by Landlord in connection with any such Environmental Assessment initially shall be paid by Landlord; provided that if any such Environmental Assessment shows that Tenant has failed to comply with the provisions of this Article 28, then all of the costs and expenses of such Environmental Assessment shall be reimbursed by Tenant as Additional Rent within thirty (30) days after Tenant's receipt of written demand therefor.

(j) At or prior to the expiration or earlier termination of the Term, Landlord may require that Tenant, at Tenant's sole cost and expense: (i) cause an Environmental Assessment of the Premises and the Project to be conducted in accordance with Section 29(f)(i); (ii) cause all Hazardous Material to be removed from the Premises and the Project and disposed of in accordance with all Laws and as necessary to allow the Premises to be used for any purpose; and (iii) cause to be removed all containers installed or used by Tenant or any of its agents, contractors, employees or invitees or customers to store any Hazardous Material on the Premises, and cause to be repaired any damage to the Premises and the Project caused by such removal.

(k) If any written report, including any report containing results of any Environmental Assessment (an "**Environmental Report**") shall indicate (i) the presence of any Hazardous Material as to which Tenant has a removal or remediation obligation under this Article 28, and (ii) that as a result of same, the investigation, characterization, monitoring, assessment, repair, closure, remediation, removal, or other clean-up (the "**Clean-up**") of any Hazardous Material is required, Tenant shall immediately prepare and submit to Landlord within thirty (30) days after receipt of the Environmental Report a comprehensive plan, subject to Landlord's written approval, specifying the actions to be taken by Tenant to perform the Clean-up so that the Premises and the Project are restored to the conditions required by this Lease. Upon Landlord's approval of the Clean-up plan, Tenant shall, at Tenant's sole cost and expense, without limitation on any rights and remedies of Landlord under this Lease, immediately implement such plan with a consultant reasonably acceptable to Landlord and proceed to Clean-Up Hazardous Material in accordance with all Laws and as required by such plan and this Lease. If, within thirty (30) days after receiving a copy of such Environmental Report, Tenant fails either (a) to complete such Clean-up, or (b) with respect to any Clean-up that cannot be completed within such thirty-day period, fails to proceed with diligence to prepare the Clean-up plan and complete the Clean-up as promptly as practicable, then Landlord shall have the right, but not the obligation, and without waiving any other rights under this Lease, to carry out any Clean-up recommended by the Environmental Report or required by any governmental authority having jurisdiction over the Premises and the Project, and recover all of the costs and expenses thereof from Tenant as Additional Rent, payable within thirty (30) days after receipt of written demand therefor.

(l) Tenant shall continue to pay all Rent due or accruing under this Lease during any Clean-up, and shall not be entitled to any reduction, offset or deferral of any Basic Rental or Additional Rent due or accruing under this Lease during any such Clean-up.

(m) Tenant shall complete any Clean-up prior to surrender of the Premises upon the expiration or earlier termination of this Lease. Tenant shall obtain and deliver to Landlord a letter or other written determination from the overseeing governmental authority confirming that the Clean-up has been completed in accordance with all requirements of such governmental authority and that no further response action of any kind is required for the unrestricted use of the Premises ("**Closure Letter**"). Upon the expiration or earlier termination of this Lease, Tenant shall also be obligated to close all permits obtained in connection with Hazardous Material in accordance with applicable Laws.

(n) Should any Clean-up for which Tenant is responsible not be completed, or should Tenant not receive the Closure Letter and any governmental approvals required under Laws in conjunction with such Clean-up prior to the expiration or earlier termination of this Lease, then Tenant shall be liable to Landlord as a holdover tenant (as more particularly provided in Article 5) until Tenant has fully complied with its obligations under this Article 28.

(o) Unless compelled to do so by applicable Law, Tenant agrees that Tenant shall not disclose, discuss, disseminate or copy any information, data, findings, communications, conclusions and reports regarding the environmental condition of the Premises or the Project to any person or entity (other than Tenant's consultants, attorneys, property managers and employees that have a need to know such information), including any governmental authority, without the prior written consent of Landlord. In the event Tenant reasonably believes that disclosure is compelled by applicable Law, it shall provide Landlord ten (10) days' advance notice of disclosure of confidential information so that Landlord may attempt to obtain a protective order. Tenant may additionally release such information to bona fide prospective purchasers or lenders, subject to any such parties' written agreement to be bound by the terms of this Section 28(o).

(p) Within thirty (30) days of receipt thereof, Tenant shall provide Landlord with a copy of any and all environmental assessments, audits, studies and reports in Tenant's possession regarding Tenant's activities with respect to the Premises, the Project, or ground water beneath the Real Property, or the environmental condition or Clean-up thereof. Tenant shall be obligated to provide Landlord with a copy of such materials without regard to whether such materials are generated by Tenant or prepared for Tenant, or how Tenant comes into possession of such materials.

(q) Tenant shall be responsible for posting on the Premises any signs required under applicable Laws. Tenant shall also complete and file any business response plans or inventories required by any applicable Laws. Tenant shall concurrently file a copy of any such business response plan or inventory with Landlord.

(r) Each covenant, agreement, representation, warranty and indemnification made by Tenant set forth in this Article 28 shall survive the expiration or earlier termination of this Lease and shall remain effective until all of Tenant's obligations under this Article 28 have been completely performed and satisfied.

(s) Landlord represents to Tenant that, to the best of Landlord's actual knowledge as of the date hereof, the Project does not currently contain any Hazardous Material in violation of any existing applicable Laws. As used herein, the phrase "**actual knowledge**" shall mean the actual knowledge of Landlord's property manager for the Project, without investigation or inquiry or duty of investigation or inquiry. Landlord shall be responsible, at Landlord's sole cost and expense (and not as a part of Operating Costs), to remove, abate or remediate any Landlord's Hazardous Materials. The term "**Landlord's Hazardous Materials**" shall mean Hazardous Materials which are present in, on, under or about the Project or Premises as of the date of this Lease or which are released or brought in, on, under or about the Project or Premises by Landlord or any agent, employee, or contractor of Landlord. Landlord's Hazardous Materials shall specifically not include any Hazardous Materials released, disturbed, transported, stored, generated or used by Tenant or any agent, representative, contractor, invitee, vendor, customer or employee of Tenant in connection with or related to any dealings with Tenant at the Project after the Effective Date of this Lease or any Hazardous Materials released, disturbed, transported, stored, generated or used by any other tenant or occupant of the Project.

ARTICLE 29
SURRENDER OF PREMISES; REMOVAL OF PROPERTY

(a) The voluntary or other surrender of this Lease by Tenant to Landlord, or a mutual termination hereof, shall not work a merger, and shall at the option of Landlord, operate as an assignment to it of any or all subleases or subtenancies affecting the Premises.

(b) Upon the expiration of the Term of this Lease, or upon any earlier termination of this Lease, Tenant shall quit and surrender possession of the Premises to Landlord in good order and condition, reasonable wear and tear, casualty, condemnation and repairs which are Landlord's obligation excepted, and shall, without expense to Landlord, remove or cause to be removed from the Premises all debris and rubbish, all furniture, equipment, business and trade fixtures, free-standing cabinet work, moveable partitioning, movable glass washing equipment and autoclaves, telecommunications and data equipment, cabling and wiring and other articles of personal property in the Premises, except any items required to remain in the Premises pursuant to Section 29(d) below. Tenant shall be responsible for the cost to repair all damage to the Premises resulting from the removal of any of such items from the Premises, provided that Landlord shall have the right to either (I) cause Tenant to perform said repair work, or (II) perform said repair work itself, at Tenant's expense (with any such costs incurred by Landlord to be reimbursed by Tenant to Landlord within thirty (30) days following written demand therefor from Landlord).

(c) Whenever Landlord shall reenter the Premises as provided in Article 20 hereof, or as otherwise provided in this Lease, any property of Tenant not removed by Tenant upon the expiration of the Term of this Lease (or within forty-eight (48) hours after a termination by reason of Tenant's default (beyond applicable notice and cure periods)), as provided in this Lease, shall be considered abandoned and Landlord may remove any or all of such items and dispose of the same in any manner or store the same in a public warehouse or elsewhere for the account and at the expense and risk of Tenant, and if Tenant shall fail to pay the cost of storing any such property after it has been stored for a period of thirty (30) days or more, Landlord may sell any or all of such property at public or private sale, in such manner and at such times and places as Landlord, in its sole discretion, may deem proper, without notice to or demand upon Tenant, for the payment of all or any part of such charges or the removal of any such property, and shall apply the proceeds of such sale as follows: first, to the cost and expense of such sale, including reasonable attorneys' fees and costs for services rendered; second, to the payment of the cost of or charges for storing

any such property; third, to the payment of any other sums of money which may then or thereafter be due to Landlord from Tenant under any of the terms hereof; and fourth, the balance, if any, to Tenant.

(d) All (i) fixtures, Alterations and other Improvements and/or appurtenances attached to or built into the Premises prior to or during the Term (including, without limitation, all floor coverings, drapes, paneling, built-in cabinetry, molding, doors, plumbing systems, security systems, electrical systems, lighting systems, all fixtures and outlets and for all telephone, radio and television purposes, and any special flooring or ceiling installations), and (ii) all built-in machinery, built-in casework and cabinets or other similar additions, equipment, property or improvements built into the Premises, so as to become an integral part of the Premises, including, without limitation, fume hoods which penetrate the roof or plenum area, built-in or walk-in cold rooms, built-in or walk-in warm rooms, deionized water systems, chillers, built-in plumbing, electrical and mechanical equipment and systems, and any power generator and transfer switch (collectively, "**Laboratory Reusable Installations**"), shall be and shall remain the property of Landlord during the Term and following the expiration or earlier termination of the Term, and shall not be removed by Tenant at any time and shall remain in and be surrendered with the Premises as part thereof, whether by Landlord or Tenant and whether at the expense of Landlord or Tenant, or of both, shall be and remain part of the Premises and shall not be removed by Tenant at the end of the Term unless (i) otherwise expressly provided for in this Lease to be removed by Tenant upon the expiration or earlier termination of this Lease, or (ii) such Alteration or other Improvement is reasonably determined by Landlord to be a Specialty Improvement and Landlord elected to require removal of such Specialty Improvement at the time Landlord approved such Specialty Improvement in accordance with Section 9(e) above. Tenant shall be deemed during the period that Tenant or Landlord, as the case may be, performs any obligations relating to the surrender of the Premises as required under this Lease to be in holdover under Article 5 of this Lease.

(e) Landlord agrees that all of the equipment currently located in the Premises set forth on **Exhibit "I"** shall not be removed by Landlord and shall be delivered to Tenant together with the Premises ("**Initial Equipment**"). Notwithstanding anything to the contrary in this Lease, Landlord and Tenant acknowledge and agree that, as set forth on **Exhibit "F"** attached hereto and made a part hereof, certain of the Initial Equipment shall remain in the Premises following the expiration or earlier termination of this Lease and become Landlord's property ("**Non-Removal Equipment**") and certain equipment in the Premises shall be removed by Tenant at Tenant's sole cost and expense upon the expiration or earlier termination of this Lease ("**Removal Equipment**") in which case Tenant shall repair any damage to the Premises resulting from such removal. If Tenant has additional equipment ("**Additional Equipment**") installed in the Premises that is not identified on **Exhibit "F"**, prior to the installation of such Additional Equipment, Landlord shall determine whether such Additional Equipment shall remain or be removed by Tenant from the Premises upon the expiration or earlier termination of this Lease. Tenant shall have the exclusive right to use the Initial Equipment in the Premises during the Term and shall maintain and repair the Non-Removal Equipment in the same condition as received, reasonable wear and tear excepted. Tenant shall be responsible for the cost to repair all damage to the Premises resulting from the removal of any of such items from the Premises, provided that Landlord shall have the right to either (I) cause Tenant to perform said repair work, or (II) perform said repair work itself, at Tenant's expense (with any such costs incurred by Landlord to be reimbursed by Tenant to Landlord within three (3) business days following written demand therefor from Landlord).

(f) Notwithstanding anything to the contrary contained in this Lease, if any portion of the Premises is used as a laboratory ("**Lab Space**"), then at least thirty (30) days prior to Tenant's surrender of possession of the Premises (or in the event of an earlier termination of this Lease, as soon as reasonably possible following such termination), Tenant shall provide Landlord with a facility decommissioning and Hazardous Material closure plan for the Lab Space which complies with the American National Standards Institute's Laboratory Decommissioning guidelines (ANSI/AIHA Z9.11-2008) or any successor standards published by ANSI or any successor organization (or, if ANSI and its successors no longer exist, a similar entity publishing similar standards) ("**Exit Survey**") prepared by an independent third party state-certified professional with appropriate expertise, in a form reasonably acceptable to Landlord. The Exit Survey must confirm that the Lab Space is in a clean and safe condition and free and clear of any Hazardous Material

caused by Tenant or any Tenant Party and shall also include reasonable detail concerning the clean-up measures taken, the clean-up locations, the tests run and the analytic results of the decommissioning and closure plan. In addition, at least ten (10) days prior to Tenant's surrender of possession of any Lab Space, Tenant shall (i) provide Landlord with written evidence of all appropriate governmental releases obtained by Tenant in accordance with Laws (e.g., decommissioning of any radioactive licenses) and relating to any Hazardous Material used at the Premises, and (ii) conduct a site inspection with Landlord. Landlord may require that Tenant provide an Environmental Assessment for the Project upon Tenant's surrender of the Premises in addition to the Exit Survey. In addition, Tenant agrees to remain responsible after the surrender of the Premises for the remediation of any recognized environmental conditions set forth in the Exit Survey (and the Environmental Assessment as applicable) in accordance with a remediation plan reasonably approved by Landlord pursuant to Section 28(k). Tenant's obligations under this Section 29(f) shall survive the expiration or earlier termination of this Lease.

ARTICLE 30
MISCELLANEOUS

(a) **SEVERABILITY; ENTIRE AGREEMENT. ANY PROVISION OF THIS LEASE WHICH SHALL PROVE TO BE INVALID, VOID, OR ILLEGAL SHALL IN NO WAY AFFECT, IMPAIR OR INVALIDATE ANY OTHER PROVISION HEREOF AND SUCH OTHER PROVISIONS SHALL REMAIN IN FULL FORCE AND EFFECT. THIS LEASE AND THE EXHIBITS AND ANY ADDENDUM ATTACHED HERETO CONSTITUTE THE ENTIRE AGREEMENT BETWEEN THE PARTIES HERETO WITH REGARD TO TENANT'S OCCUPANCY OR USE OF ALL OR ANY PORTION OF THE PROJECT, AND NO PRIOR AGREEMENT OR UNDERSTANDING PERTAINING TO ANY SUCH MATTER SHALL BE EFFECTIVE FOR ANY PURPOSE. NO PROVISION OF THIS LEASE MAY BE AMENDED OR SUPPLEMENTED EXCEPT BY AN AGREEMENT IN WRITING SIGNED BY THE PARTIES HERETO OR THEIR SUCCESSOR IN INTEREST. THE PARTIES AGREE THAT ANY DELETION OF LANGUAGE FROM THIS LEASE PRIOR TO ITS MUTUAL EXECUTION BY LANDLORD AND TENANT SHALL NOT BE CONSTRUED TO HAVE ANY PARTICULAR MEANING OR TO RAISE ANY PRESUMPTION, CANON OF CONSTRUCTION OR IMPLICATION INCLUDING, WITHOUT LIMITATION, ANY IMPLICATION THAT THE PARTIES INTENDED THEREBY TO STATE THE CONVERSE, OBVERSE OR OPPOSITE OF THE DELETED LANGUAGE.**

(b) Attorneys' Fees; Waiver of Jury Trial.

(i) In any action to enforce the terms of this Lease, including any suit by Landlord for the recovery of rent or possession of the Premises, the losing party shall pay the successful party a reasonable sum for attorneys' fees and costs in such suit and such attorneys' fees and costs shall be deemed to have accrued prior to the commencement of such action and shall be paid whether or not such action is prosecuted to judgment. Tenant shall also reimburse Landlord for all costs incurred by Landlord in connection with enforcing its rights under this Lease against Tenant following a bankruptcy by Tenant or otherwise, including, without limitation, reasonable legal fees, reasonable experts' fees and expenses, court costs and reasonable consulting fees.

(ii) Should Landlord, without fault on Landlord's part, be made a party to any litigation instituted by Tenant or by any third party against Tenant, or by or against any person holding under or using the Premises by license of Tenant, or for the foreclosure of any lien for labor or material furnished to or for Tenant or any such other person or otherwise arising out of or resulting from any act or transaction of Tenant or of any such other person, Tenant covenants to save and hold Landlord harmless from any judgment rendered against Landlord or the Premises or any part thereof and from all costs and expenses, including reasonable attorneys' fees and costs incurred by Landlord in connection with such litigation.

(iii) **TO THE EXTENT PERMITTED BY LAW, EACH PARTY HEREBY WAIVES ANY RIGHT TO A TRIAL BY JURY IN ANY ACTION SEEKING SPECIFIC PERFORMANCE OF ANY PROVISION OF THIS LEASE, FOR DAMAGES FOR ANY BREACH UNDER THIS LEASE, OR OTHERWISE FOR ENFORCEMENT OF ANY RIGHT OR REMEDY HEREUNDER**.

(c) Time of Essence. Each of Tenant's covenants herein is a condition and time is of the essence with respect to the performance of every provision of this Lease.

(d) Headings; Joint and Several. The article headings contained in this Lease are for convenience only and do not in any way limit or amplify any term or provision hereof. The terms "Landlord" and "Tenant" as used herein shall include the plural as well as the singular, the neuter shall include the masculine and feminine genders and the obligations herein imposed upon Tenant shall be joint and several as to each of the persons, firms or corporations of which Tenant may be composed.

(e) Reserved Area. Tenant hereby acknowledges and agrees that the exterior walls of the Premises and the area between the finished ceiling of the Premises and the slab of the floor of the Project thereabove have not been demised hereby and the use thereof together with the right to install, maintain, use, repair and replace pipes, ducts, conduits, wiring and cabling leading through, under or above the Premises or throughout the Project in locations which will not materially interfere with Tenant's use of the Premises and serving other parts of the Project are hereby excepted and reserved unto Landlord.

(f) **NO OPTION. THE SUBMISSION OF THIS LEASE BY LANDLORD, ITS AGENT OR REPRESENTATIVE FOR EXAMINATION OR EXECUTION BY TENANT DOES NOT CONSTITUTE AN OPTION OR OFFER TO LEASE THE PREMISES UPON THE TERMS AND CONDITIONS CONTAINED HEREIN OR A RESERVATION OF THE PREMISES IN FAVOR OF TENANT, IT BEING INTENDED HEREBY THAT THIS LEASE SHALL ONLY BECOME EFFECTIVE UPON THE EXECUTION HEREOF BY LANDLORD AND TENANT AND DELIVERY OF A FULLY EXECUTED LEASE TO TENANT**.

(g) Use of Project Name; Improvements. Tenant shall not be allowed to use the name, picture or representation of the Project, or words to that effect, in connection with any business carried on in the Premises or otherwise (except as Tenant's address) without the prior written consent of Landlord, which shall not be unreasonably withheld, conditioned or delayed. In the event that Landlord undertakes any additional improvements on the Real Property including but not limited to new construction or renovation or additions to the existing improvements, Landlord shall not be liable to Tenant for any noise, dust, vibration or interference with access to the Premises or disruption in Tenant's business caused thereby and Landlord agrees to use reasonable efforts to not unreasonably interfere with Tenant's operations at the Premises in connection with such construction, renovation or addition.

(h) Rules and Regulations. Tenant shall observe faithfully and comply strictly with the rules and regulations ("**Rules and Regulations**") attached to this Lease as **Exhibit "B"** and made a part hereof, and such other Rules and Regulations as Landlord may from time to time reasonably adopt and provide written notice thereof to Tenant for the safety, care and cleanliness of the Project, the facilities thereof, or the preservation of good order therein. To the extent there are any inconsistencies between the provisions of this Lease and the Rules and Regulation, the terms and conditions of this Lease shall control. Landlord shall not be liable to Tenant for violation of any such Rules and Regulations, or for the breach of any covenant or condition in any lease by any other tenant in the Project. A waiver by Landlord of any Rule or Regulation for any other tenant shall not constitute nor be deemed a waiver of the Rule or Regulation for this Tenant.

(i) Quiet Possession. Provided that no Event of Default has occurred, Tenant shall have the right to lawfully, peaceably and quietly have, hold, occupy and enjoy the Premises during the term hereof, without hindrance or ejection by any persons lawfully claiming under Landlord to have title to the Premises superior to Tenant, subject to all of the provisions of this Lease. The foregoing covenant of quiet enjoyment is in lieu of any other covenant of quiet enjoyment, express or implied.

(j) Rent. All payments required to be made hereunder to Landlord shall be deemed to be rent, whether or not described as such.

(k) Successors and Assigns. Subject to the provisions of Article 15 hereof, all of the covenants, conditions and provisions of this Lease shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, personal representatives, successors and assigns.

(l) Notices. Any notice required or permitted to be given hereunder shall be in writing and may be given by personal service evidenced by a signed receipt (or refusal to accept delivery) or sent by registered or certified mail, return receipt requested, or via overnight courier, and shall be effective upon proof of delivery (or refusal to accept delivery), addressed to Tenant at the Premises or to Landlord as follows:

IQHQ-4 CORPORATE, LLC
c/o IQHQ, L.P.
674 Via De La Valle, Suite 206
Solana Beach, CA 92075

Attn:

With a copy to:

c/o IQHQ, L.P.
674 Via de la Valle, Suite 206
Attn: Legal Department
Solana Beach, CA 92075
Email:

If to Tenant:

GENERATE BIOMEDICINES, INC.
c/o Flagship Pioneering, Inc.
55 Cambridge Parkway, Suite 800E
Cambridge, MA 02142
Attention:
Email:

With a copy to:

Goodwin Procter LLP
100 Northern Avenue
Boston, MA 02210
Attention:
Email:

Either party may by notice to the other specify a different address for notice purposes. A copy of all notices to be given to Landlord hereunder shall be concurrently transmitted by Tenant to such party hereafter designated by notice from Landlord to Tenant. A copy of all notices to be given to Tenant hereunder shall be concurrently transmitted by Landlord to such party hereafter designated by notice from Tenant to Landlord.

(m) Intentionally omitted.

(n) Right of Landlord to Perform. All covenants and agreements to be performed by Tenant under any of the terms of this Lease shall be performed by Tenant at Tenant's sole cost and expense and without any abatement of rent, except as otherwise expressly provided in this Lease. If Tenant shall fail to pay any sum of money, other than rent, required to be paid by it hereunder or shall fail to perform any other act on its part to be performed hereunder, and such failure shall continue beyond any applicable cure period set forth in this Lease, Landlord may, but shall not be obligated to, without waiving or releasing Tenant from any obligations of Tenant, make any such

payment or perform any such other act on Tenant's part to be made or performed as is in this Lease provided. All sums so paid by Landlord and all reasonable incidental costs, together with interest thereon at the rate specified in Section 20(e) above from the date of such payment by Landlord, shall be payable to Landlord within thirty (30) days after Tenant's receipt of an invoice therefor and Tenant covenants to pay any such sums, and Landlord shall have (in addition to any other right or remedy of Landlord) the same rights and remedies in the event of the nonpayment thereof by Tenant as in the case of default by Tenant in the payment of the rent.

(o) Access, Changes in Project, Facilities, Name.

(i) Every part of the Project except the inside surfaces of all walls, windows and doors bounding the Premises (including exterior building walls, the rooftop, core corridor walls and doors and any core corridor entrance), and any space in or adjacent to the Premises or within the Project used for shafts, stacks, pipes, conduits, fan rooms, ducts, electric or other utilities, sinks or other building facilities, and the use thereof, as well as access thereto through the Premises for the purposes of operation, maintenance, decoration and repair, are reserved to Landlord.

(ii) Landlord reserves the right, without incurring any liability to Tenant therefor, to make such changes in or to the Project and the fixtures and equipment thereof, as well as in or to the street entrances, halls, passages, elevators, stairways and other improvements thereof, as it may deem necessary or desirable provided that such changes do not materially adversely affect Tenant's use of or access to the Premises or materially decrease its rights or materially increase obligations set forth in this Lease.

(iii) Landlord may adopt any name for the Project and Landlord reserves the right, from time to time, to change the name and/or address of the Project at any time.

(p) Signing Authority. If Tenant is a corporation, partnership or limited liability company, each individual executing this Lease on behalf of said entity represents and warrants that he or she is duly authorized to execute and deliver this Lease on behalf of said entity in accordance with: (i) if Tenant is a corporation, a duly adopted resolution of the Board of Directors of said corporation or in accordance with the By-laws of said corporation, (ii) if Tenant is a partnership, the terms of the partnership agreement, and (iii) if Tenant is a limited liability company, the terms of its operating agreement, and that this Lease is binding upon said entity in accordance with its terms.

(q) Identification of Tenant.

(i) If Tenant constitutes more than one person or entity, (A) each of them shall be jointly and severally liable for the keeping, observing and performing of all of the terms, covenants, conditions and provisions of this Lease to be kept, observed and performed by Tenant, and (B) the term "Tenant" as used in this Lease shall mean and include each of them jointly and severally.

(ii) If Tenant is a partnership (or is comprised of two or more persons, individually and as co-partners of a partnership) or if Tenant's interest in this Lease shall be assigned to a partnership (or to two or more persons, individually and as co-partners of a partnership) pursuant to Article 15 hereof (any such partnership and such persons hereinafter referred to in this Section 30(q)(ii) as "**Partnership Tenant**"), the following provisions of this Lease shall apply to such Partnership Tenant:

(A) The liability of each of the parties comprising Partnership Tenant shall be joint and several.

(B) Each of the parties comprising Partnership Tenant hereby consents in advance to, and agrees to be bound by, any written instrument which may hereafter be executed, changing, modifying or discharging this Lease, in whole or in part, or surrendering all or any part of the Premises to the Landlord, and by notices, demands, requests or other communication which may hereafter be given, by the individual or individuals authorized to execute this Lease on behalf of Partnership Tenant under Subparagraph (p) above.

(C) Any bills, statements, notices, demands, requests or other communications given or rendered to Partnership Tenant or to any of the parties comprising Partnership Tenant shall be deemed given or rendered to Partnership Tenant and to all such parties and shall be binding upon Partnership Tenant and all such parties.

(D) If Partnership Tenant admits new partners, all of such new partners shall, by their admission to Partnership Tenant, be deemed to have assumed performance of all of the terms, covenants and conditions of this Lease on Tenant's part to be observed and performed.

(E) Partnership Tenant shall give prompt notice to Landlord of the admission of any such new partners, and, upon demand of Landlord, shall cause each such new partner to execute and deliver to Landlord an agreement in form satisfactory to Landlord, wherein each such new partner shall assume performance of all of the terms, covenants and conditions of this Lease on Partnership Tenant's part to be observed and performed (but neither Landlord's failure to request any such agreement nor the failure of any such new partner to execute or deliver any such agreement to Landlord shall terminate the provisions of clause (D) of this Section 30(q)(ii) or relieve any such new partner of its obligations thereunder).

(r) Intentionally omitted.

(s) Survival of Obligations. Any obligations of Tenant occurring prior to the expiration or earlier termination of this Lease shall survive such expiration or earlier termination.

(t) Confidentiality. Tenant acknowledges that the content of this Lease and any related documents are confidential information (the "**Confidential Information**"). Tenant shall keep the Confidential Information strictly confidential and shall not disclose such confidential information to any person or entity other than Tenant's financial, legal and space planning consultants and any proposed Transferees. Notwithstanding the foregoing, Landlord acknowledges that Tenant shall have the right to disclose such Confidential Information to prospective subtenants and assignees, advisors, investors, lawyers, accountants, lenders, bankers and their respective employees provided that such disclosure is made under an obligation of confidentiality, and to disclose only such Confidential Information as may be necessary to enforce the terms and conditions of this Lease and to the extent that such disclosure is required by Law (including but not limited to as may be required by applicable securities laws) or court order or by discovery rules in any legal proceeding. Nothing contained in this Lease is intended to prohibit Tenant from filing this Lease with the Securities and Exchange Commission ("**SEC**") to the extent that Tenant is required to do so pursuant to applicable SEC requirements.

(u) Governing Law. This Lease shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts. No conflicts of law rules of any state or country (including, without limitation, Massachusetts conflicts of law rules) shall be applied to result in the application of any substantive or procedural laws of any state or country other than Massachusetts. All controversies, claims, actions or causes of action arising between the parties hereto and/or their respective successors and assigns, shall be brought, heard and adjudicated by the courts of the Commonwealth of Massachusetts, with venue in the county in which the Project is located. Each of the parties hereto hereby consents to personal jurisdiction by the courts of the Commonwealth of Massachusetts in connection with any such controversy, claim, action or cause of action, and each of the parties hereto consents to service of process by any means authorized by Massachusetts law and consent to the enforcement of any judgment so obtained in the courts of the Commonwealth of Massachusetts on the same terms and conditions as if such controversy, claim, action or cause of action had been originally heard and adjudicated to a final judgment in such courts. Each of the parties hereto further acknowledges that the laws and courts of the Commonwealth of Massachusetts were freely and voluntarily chosen to govern this Lease and to adjudicate any claims or disputes hereunder.

(v) Office of Foreign Assets Control. Tenant certifies to Landlord that (i) Tenant is not entering into this Lease, nor acting, for or on behalf of any person or entity named as a terrorist or other banned or blocked person or entity pursuant to any law, order, rule or regulation of the United States Treasury Department or the Office of Foreign Assets Control, and (ii) Tenant shall not assign this Lease or sublease to any such person or entity or anyone acting on behalf of any such

person or entity. Landlord shall have the right to conduct all reasonable searches in order to ensure compliance with the foregoing. Tenant hereby agrees to indemnify, defend and hold Landlord and the Landlord Parties harmless from any and all claims arising from or related to any breach of the foregoing certification.

(w) Financial Statements. Unless Tenant is a publicly traded company, in which case this Section 30(w) shall not apply to Tenant while Tenant is publicly traded and its financial statements are publicly availiable, within ten (10) business days after Tenant's receipt of Landlord's written request (which request may be made no more often than one time every twelve (12) month period provided that such limitation shall not apply in the event of a sale or financing of any of Landlord's interest in the Lease or the Premises), Tenant shall provide Landlord with Tenant's most recently completed balance sheet and related statements of income, shareholder's equity and cash flows statements, certified by an officer of Tenant as being true and correct in all material respects. The foregoing shall be prepared in accordance with generally accepted accounting principles ("**GAAP**").

(x) Exhibits. The Exhibits attached hereto are incorporated herein by this reference as if fully set forth herein.

(y) Independent Covenants. This Lease shall be construed as though the covenants herein between Landlord and Tenant are independent (and not dependent) and Tenant hereby expressly waives the benefit of any statute to the contrary and agrees that if Landlord fails to perform its obligations set forth herein, Tenant shall not be entitled to make any repairs or perform any acts hereunder at Landlord's expense or to set off of any of the rent or other amounts owing hereunder against Landlord.

(z) Counterparts. This Lease may be executed in counterparts, each of which shall be deemed an original, but such counterparts, when taken together, shall constitute one agreement. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law (e.g., www.docusign.com)), or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

(aa) Non-Discrimination. Tenant herein covenants that Tenant and its heirs, executors, administrators and assigns, and all persons claiming under or through Tenant, and this Lease is made and accepted upon and subject to the following conditions:

> "That there shall be no discrimination against or segregation of any person or group of persons on account of race, color, creed, religion, sex, marital status, national origin or ancestry, in the leasing, subleasing, transferring, use, occupancy, tenure or enjoyment of the Premises, nor shall Tenant, or any person claiming under or through Tenant, establish or permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, subtenants or vendees in the Premises."

(bb) Utility Information. Upon written notice from Landlord ("**Utility Bill Notice**"), Landlord may require Tenant to provide Landlord with copies of bills received by Tenant with respect to a period of up to twelve (12) months prior to the date of the Utility Bill Notice from electricity, natural gas or similar utility providers (collectively, "**Utility Providers**") relating to utility usage at the Premises (collectively, "**Utility Bills**"). Tenant shall provide such Utility Bills to Landlord within ten (10) days after Landlord's delivery of a Utility Bill Notice to Tenant. In addition, Tenant hereby authorizes Landlord to obtain copies of the Utility Bills directly from the Utility Providers, and Tenant hereby authorizes each Utility Provider to provide Utility Bills and related utility usage information for the Premises directly to Landlord. From time to time within fifteen (15) business days after Landlord's written request, Tenant shall execute and deliver to Landlord further assurances requested by Landlord authorizing Utility Providers to provide to Landlord Utility Bills and other information relating to utility usage at the Premises. Tenant

acknowledges that any utility information for the Premises and the Project may be shared with third parties, including Landlord's consultants and governmental authorities and agencies. In addition to the foregoing, Tenant shall comply with all applicable Laws related to the disclosure, reporting and tracking of energy consumption at the Premises. The provisions of this Section shall survive the expiration or earlier termination of this Lease.

(cc) Limitation on Tenant's Liability. Except with respect to Tenant's liability for damages under Article 5 (Holdover) and Article 28 (Hazardous Material), in no event shall Tenant be liable to Landlord for consequential or incidental damages or for lost profits whatsoever in connection with this Lease for liability Tenant may have.

ARTICLE 31
EARLY TERMINATION OPTION

The Tenant named in this Lease (the "**Original Tenant**") and, to the extent this Lease is assigned to a Flagship Pioneering Portfolio Company pursuant to Section 15(f) above, such Flagship Pioneering Portfolio Company may at its option (the "**Early Termination Option**"), by written notice ("**Tenant's Early Termination Notice**") given by Tenant to Landlord as hereinafter set forth, have a one-time election to cancel and terminate this Lease with respect to the entire Premises prior to the scheduled expiration of the Term effective as of the end of the day on September 30, 2024 (the "**Early Termination Date**"), provided that (i) there is no Event of Default in existence and continuing as of the date of delivery of the Tenant's Early Termination Notice or as of the Early Termination Date, (ii) such Early Termination Notice shall be given not less than nine (9) months prior to the Early Termination Date, and (iii) Tenant shall certify to Landlord in the Early Termination Notice that a Flagship Pioneering Portfolio Company has, following the Commencement Date, entered into a new lease (a "**Future IQHQ Lease**") with an entity that is a wholly owned subsidiary or affiliate of IQHQ, Inc., a Maryland corporation (an "**IQHQ Affiliate**"), such Future IQHQ Lease is in full force and effect and the base rent under such Future IQHQ Lease for each year of the term of such Future IQHQ Lease is in excess of $3,558,433.00 per annum. Notwithstanding Tenant's exercise of the Early Termination Option, Tenant shall pay to Landlord, all annual Basic Rental, Tenant's Proportionate Share of Direct Costs and Tax Costs, Tank Costs, Tenant's electricity, and all other Additional Rent due from Tenant (including, but not limited to, all past due amounts thereof) as such amounts and payments become due and payable in accordance with the requisite provisions of this Lease through and including the Early Termination Date (subject to pro-ration for any partial calendar month as set forth below). On the Early Termination Date, Tenant shall quit and vacate the entire Premises and surrender the same to Landlord in the condition required by the applicable provisions of this Lease. In the event that any amounts of Additional Rent required to be paid by Tenant with respect to the portion of the Term ending on the Early Termination Date are not finally determined as of the Early Termination Date, Tenant shall make payment on account of thereof as reasonably estimated by Landlord and Tenant shall make final payment of any remaining amounts due within thirty (30) days after final billing by Landlord (including, without limitation, with respect any final year-end reconciliation provided in Article 3 of this Lease). In the event of any overpayment by Tenant on account of any of such foregoing amounts, Landlord shall promptly refund to Tenant the amount in excess of the amount due from Tenant. The provisions of this Article 31 shall survive the termination of the Lease. Time is of the essence with respect to all of the time periods set forth in this Article 31. The rights contained in this Article 31 shall be personal to the Original Tenant and may only be exercised by the Original Tenant (and not any assignee, sublessee or other transferee of the Original Tenant's interest in this Lease); provided, however, to the extent this Lease is assigned to a Flagship Pioneering Portfolio Company pursuant to Section 15(f) above, such Flagship Pioneering Portfolio Company shall continue to have the right to exercise the rights provided to Tenant herein.

ARTICLE 32
RESERVED

ARTICLE 33
SIGNAGE/DIRECTORY

Landlord shall, at Landlord's expense, (i) install a building standard entry sign with Tenant's name adjacent to its main entrance in a location and with such design as is mutually agreed between Landlord and Tenant, and (ii) provide Tenant with a listing in the main lobby directory for the Pod 1 Building ("**Tenant's Signage**"). Excluding the lobby directory signage, which shall be maintained by Landlord as part of Operating Costs, Tenant, at its cost and expense, shall maintain all such signage in good condition and repair throughout the Term, including, without limitation, replacing any such signage as reasonably necessary throughout the Term. Except as provided in the foregoing, Tenant shall not place or permit to be placed any lights, decorations, banners, signs, window or door lettering, advertising media, or any other item that can be viewed from the exterior of the Premises without obtaining Landlord's prior written consent, which may be withheld in Landlord's sole discretion. Tenant's Signage shall be subject to Landlord's approval as to size, design, location, graphics, materials, colors and similar specifications and shall be consistent with the exterior design, materials and appearance of the Project and the Project's signage program and shall be further subject to all applicable Laws and Tenant's receipt of all permits and other governmental approvals and any applicable covenants, conditions and restrictions. Upon the expiration of the Term, or other earlier termination of this Lease, Tenant shall be responsible for any and all costs associated with the removal of Tenant's Signage, including, but not limited to, the cost to repair and restore the Project to its original condition, normal wear and tear excepted.

[*Signatures appear on following page*]

IN WITNESS WHEREOF, the parties have executed this Lease, consisting of the foregoing provisions and Articles, including all exhibits and other attachments referenced therein, as a sealed Massachusetts instrument as of the date first above written.

"LANDLORD" **IQHQ-4 CORPORATE, LLC,**
a Delaware limited liability company

By: /s/ Tracy Murphy
Print Name: Tracy Murphy
Title: President

"TENANT" **GENERATE BIOMEDICINES, INC.**,
a Delaware corporation

By: /s/ Mike Nally
Print Name: Mike Nally
Title: Chief Executive Officer

FIRST AMENDMENT TO LEASE AGREEMENT

This FIRST AMENDMENT TO LEASE AGREEMENT (this "**First Amendment**") is made as of the 30th day of December, 2024 (the "**Effective Date**") by and between **IQHQ-4 CORPORATE, LLC**, a Delaware limited liability company ("**Landlord**"), and **GENERATE BIOMEDICINES, INC.**, a Delaware corporation ("**Tenant**").

R E C I T A L S

A. Landlord and Tenant are parties to that certain Lease Agreement, dated October 29, 2021 (the "**Lease**"), pursuant to which Tenant leases certain premises consisting of 74,537 rentable square feet (the "**Premises**") in the building located at North Building, Pod 1, Innovation Park, 4 Corporate Drive, Andover, Massachusetts (the "**Building**"), as more fully set forth in the Lease, for a Lease Term that is currently scheduled to expire on October 31, 2026 (the "**Current Expiration Date**").

B. Landlord and Tenant wish to enter into this First Amendment to (i) amend and extend the Lease Term, and (ii) amend certain other terms and conditions of the Lease.

NOW, THEREFORE, in consideration of the mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Landlord and Tenant hereby agree to amend the Lease as follows:

1. Capitalized Terms. All capitalized terms not defined in this First Amendment shall have the respective meanings ascribed to them in the Lease. In the event of a conflict between the provisions of the Lease and the provisions of this First Amendment, the provisions of this First Amendment shall control, and all other provisions of the Lease shall remain in full force and effect. All references in the Lease to the "Lease" or "this Lease" or "the Lease" or "herein" or "hereunder" or similar terms or to any section thereof shall mean the Lease, or such section thereof, as amended by this First Amendment.

2. Term; Condition of Premises; Landlord's Work.

(a) The Term of the Lease is hereby amended and extended for an additional period (the "**New Term**") commencing on January 1, 2025 (the "**New Term Commencement Date**") and expiring on December 31, 2034 (the "**New Expiration Date**"), unless sooner terminated as provided in the Lease. The New Term shall be upon all of the same terms and conditions contained in the Lease, except as otherwise amended or modified by the terms of this First Amendment. From and after the Effective Date, all references in the Lease to "Term" or "Term of this Lease" shall mean and refer to the Term of the Lease as amended and extended for the New Term and all references in the Lease to the "Expiration Date" shall be deemed to refer to the New Expiration Date.

(b) The Premises are being leased by Tenant for the New Term in its AS-IS condition as of the Effective Date, WITHOUT REPRESENTATION OR WARRANTY by Landlord and Tenant understands and agrees that, except as expressly provided in this First Amendment with respect to the performance of Landlord's Work as set forth in **Exhibit A** attached hereto and the payment of the TI Allowance (as defined on **Exhibit B** attached hereto), Landlord shall not be required to perform any work, supply any materials, incur any expense or pay or provide any allowance or contribution in connection with preparing the Premises for Tenant's continued occupancy for the New Term and the work agreements and any Landlord's work or allowances or contributions previously provided for in the Lease shall not be applicable to the New Term. Landlord shall construct, at its sole cost and expense, the Landlord's Work specified in **Exhibit A** by the estimated completion dates specified in **Exhibit A**, subject to Force Majeure and Tenant Delays. From and after the Effective Date, Landlord shall have access to the Premises during Normal Business Hours to perform Landlord's Work. Tenant shall use reasonable efforts to cooperate with Landlord to complete all phases of Landlord's Work and shall not interfere with the construction of Landlord's Work. In connection with such access to the Premises and performance of the Landlord's Work, Landlord shall use reasonable efforts to avoid interference with Tenant's then construction of any Project (as hereinafter defined) of the TI Work (as defined on **Exhibit B** attached hereto) that Landlord has been notified by Tenant is ongoing in the Premises. Any acts or omissions of Tenant that interfere with the construction of Landlord's Work shall be deemed a "**Tenant Delay**."

3. Basic Rental.

(a) During the remainder of the original Term through the Current Expiration Date, Tenant shall continue to pay the Basical Rental and all Additional Rent with respect to the Premises in accordance with the terms of the Lease and at the same rate and on the same terms as set forth in the Lease.

(b) Commencing on the New Term Commencement Date and thereafter during the New Term, the monthly installments of Basic Rental for the Premises shall be in accordance with the following schedule:

Period	Annual Basic Rental Rate Per R.S.F.	Annual Basic Rental	Monthly Basic Rental
January 1, 2025 – December 31, 2025*	$51.00*	$3,801,387.00*	$316,782.25*
January 1, 2026 – December 31, 2026	$52.53	$3,915,428.61	$326,285.72
January 1, 2027 – December 31, 2027	$54.11	$4,032,891.47	$336,074.29
January 1, 2028 – December 31, 2028	$55.73	$4,153,878.21	$346,156.52
January 1, 2029 – December 31, 2029	$57.40	$4,278,494.56	$356,541.21
January 1, 2030 – December 31, 2030	$59.12	$4,406,849.40	$367,237.45
January 1, 2031 – December 31, 2031	$60.90	$4,539,054.88	$378,254.57
January 1, 2032 – December 31, 2032	$62.72	$4,675,226.52	$389,602.21
January 1, 2033 – December 31, 2033	$64.61	$4,815,483.32	$401,290.28
January 1, 2034 – December 31, 2034	$66.54	$4,959,947.82	$413,328.98

* Provided there is no monetary or material non-monetary Event of Default by Tenant existing under the Lease as of the New Term Commencement Date or at any time during the Abatement Period (as hereinafter defined), the monthly installments of Basic Rental shall be abated (i.e. $1,900,693.50) (the "**Abated Rent**") for the first six (6) months of the New Term (i.e. January through June of 2025). This abatement shall affect Basic Rental only and shall not affect Tenant's obligation to pay Tenant's Proportionate Share of Direct Costs, Tank Costs, electricity charges, and all other Additional Rent or any other charges payable by Tenant under the Lease during the Abatement Period. If at any time during the Abatement Period there occurs any uncured monetary or material non-monetary Event of Default of Tenant under the Lease, Tenant's right to abate the Basic Rental under this **Section 3** for the Abatement Period shall immediately terminate and be of no further force and effect and Tenant shall immediately repay all of the Abated Rent amount to Landlord.

4. Additional Rent. During the Lease Term (as extended for the New Term), Tenant shall continue to pay all Additional Rent due under the Lease, including, without limitation, Tenant's Proportionate Share of Direct Costs (which includes Tax Costs), and Tank Costs, electricity charges and all other utilities payable under Article 11 of the Lease, and all other Additional Rent and charges due under the Lease at the times and in the manner set forth in the Lease.

5. Shuttle Service. Landlord and Tenant acknowledge and agree that the Shuttle Service has not been instituted. Landlord and Tenant shall mutually agree on a date when the Shuttle Service shall be instituted by Landlord for use by Tenant, after which date Landlord's obligations pursuant to **Section 11(a)(ix)** shall begin and shall continue during the Term of the Lease (as extended for the New Term).

6. Direct Costs. Landlord and Tenant agree that, for purposes of **Section 3(d)(iii)** of the original Lease, if and to the extent that Landlord or any Landlord affiliates permit the tenants or occupants of the building located at 1 Corporate Drive (the "**1 Corporate Drive Building**") to use the amenity spaces in the Building or any other services (such as Shuttle Service) being supplied by Landlord to both the Building and the 1 Corporate Drive Building, once the 1 Corporate Drive Building is initially occupied, then any Operating Costs associated with the amenity spaces in the Building or other services will be equitably allocated by Landlord between the cost pool for the Building and the cost pool for the 1 Corporate Drive Building.

7. Inapplicable Provisions; Amendments to the Lease. The following sections of the Lease are not applicable to the New Term: Article 31 (Early Termination Option) and Exhibit D to the Lease.

8. Letter of Credit. Landlord and Tenant acknowledge that Landlord is currently holding a Letter of Credit pursuant to **Article 4** of the Lease, in the amount of Eight Hundred Thirty-Eight Thousand Five Hundred Forty-One and 25/100 Dollars ($838,541.25) issued by Goldman Sachs Bank USA (the "**Existing Letter of Credit**"). As a material inducement to Landlord to enter into this First Amendment, on or before January 31, 2025, Tenant shall amend the Existing Letter of Credit (the "**LOC Amendment**") to (i) increase the Existing Letter of Credit to Nine Hundred Fifty Thousand Three Hundred Forty-Six and 75/100 Dollars ($950,346.75) (the "**New LOC Amount**"), and (ii) extend the final expiration date of the Existing Letter of Credit to February 28, 2035 (the "**New LOC Expiration Date**").

9. Early Termination Option.

(a) Provided that, as of both the time of exercise and as of the Early Termination Date (as hereinafter defined), (i) the Lease is in full force and effect, (ii) no Event of Default shall have occurred and be continuing, and (iii) the original Tenant named herein shall not have assigned the Lease or sublet any portion of the Premises (which any of the forgoing conditions may be waived in writing by Landlord at any time, in Landlord's sole discretion), Tenant shall have the one-time right (the "**Early Termination Option**") to terminate the Lease as to the entire Premises effective as of date specified by Tenant and falling on or after December 31, 2031. The Early Termination Option shall be exercisable only by Tenant both (1) delivering written notice (the "**Early Termination Notice**") to Landlord no later than twelve (12) months prior to the Early Termination Date, time being of the essence, and (2) paying to Landlord, within thirty (30) days after the delivery of the Early Termination Notice, an amount equal to the sum of (the "**Termination Payment**") (y) the Unamortized Portion, as hereinafter defined, of Landlord's FA Transaction Costs, as hereinafter defined; and (z) Nine Hundred Fifty Thousand Three Hundred Forty-Six and 75/100 Dollars ($950,346.75). Tenant's Early Termination Notice shall specify Tenant's selected early termination date under this **Section 9** (the "**Early Termination Date**"), which Early Termination Date shall not occur prior to December 31, 2031. For purposes of calculating the Termination Payment, the "**Unamortized Portion**" shall be defined as the amount of principal which would remain unpaid as of the Early Termination Date with respect to an interest free loan in an original principal amount equal to Landlord's FA Transaction Costs and which is repaid in equal monthly payments of principal amortized on a straight-line basis over the period commencing as of April 1, 2025 and expiring on the New Expiration Date; and "**Landlord's FA Transaction Costs**" shall be an amount equal to the sum of (A) the actual amount of the TI Allowance paid or credited by Landlord, and (B) all reasonable, third-party, legal fees incurred by Landlord in connection with this First Amendment. Landlord shall, within five (5) days after written request of Tenant provide to Tenant verification of such costs and the amount of the Unamortized Portion.

(b) Tenant's obligation to pay the Termination Payment is in addition to and not in lieu of Tenant's obligation to pay all Basic Rental and Additional Rent due under the Lease through (and including) the Early Termination Date. In the event Tenant has timely exercised the Early Termination Option and paid the Termination Payment and the conditions set forth in this Section 9 are satisfied (or otherwise so waived by Landlord), then, as of the Early Termination Date (i) the Lease shall terminate (and no instrument of amendment need be executed to effect the same) as if the Early Termination Date was the New Expiration Date, (ii) Tenant shall have no further leasehold or other right, title or interest in the Premises, pursuant to the Lease or otherwise,

and (iii) all obligations of the parties with respect to the Premises shall cease and terminate in the same manner as upon expiration of the Lease Term; provided, however, that Tenant shall remain liable hereunder for (x) all obligations and liabilities that accrue under the Lease prior to the Early Termination Date, including, without limitation, Tenant's obligation to pay Basical Rental, Tenant's Proportionate Share of Direct Costs, Tank Costs, electricity charges and all other Additional Rent, and (y) all obligations and liabilities which expressly survive the expiration or earlier termination of the Lease. On or before the Early Termination Date, Tenant shall quit, vacate and yield-up the Premises in the condition required under the Lease. Tenant hereby acknowledges that Tenant's failure to so vacate and surrender possession of the Premises (or any portion thereof) on or before the Early Termination Date shall be deemed a hold over by Tenant in the Premises, subject to the provisions of Article 5 of the Lease.

10.Brokerage Indemnity. Landlord and Tenant each represent and warrant to the other that neither of them has employed or dealt with any broker, agent, or finder in connection with this First Amendment and the transaction contemplated hereby, other than Landlord's broker, Colliers (the "**Landlord's Broker**"). Each party covenants and agrees to defend, with counsel approved by the other party, indemnify and save the other party harmless from and against any and all claims for commission, fee or other compensation by any person who claims to have dealt with the indemnitor in connection with the Lease for any and all costs incurred by the indemnitee in connection with such claims, including, without limitation, attorneys' fees and disbursements. This provision shall survive the expiration or earlier termination of the Lease. Landlord shall be responsible for any commission due to Landlord's Broker pursuant to a separate written agreement between Landlord and Landlord's Broker.

11.Ratification. Except as expressly modified by this First Amendment, the Lease shall remain in full force and effect, and as further modified by this First Amendment, is expressly ratified, and confirmed by the parties hereto. This First Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns, subject to the provisions of the Lease regarding assignment and subletting.

12.Governing Law; Interpretation and Partial Invalidity. This First Amendment shall be governed and construed in accordance with the laws of the Commonwealth of Massachusetts. If any term of this First Amendment, or the application thereof to any person or circumstances, shall to any extent be invalid or unenforceable, the remainder of this First Amendment, or the application of such term to persons or circumstances other than those as to which it is invalid or unenforceable, shall not be affected thereby, and each term of this First Amendment shall be valid and enforceable to the fullest extent permitted by law. The titles for the paragraphs are for convenience only and are not to be considered in construing this First Amendment. This First Amendment contains all of the agreements of the parties with respect to the subject matter hereof and supersedes all prior dealings between them with respect to such subject matter. No delay or omission on the part of either party to this First Amendment in requiring performance by the other party or exercising any right hereunder shall operate as a waiver of any provision hereof or any rights hereunder, and no waiver, omission or delay in requiring performance or exercising any right hereunder on any one occasion shall be construed as a bar to or waiver of such performance or right on any future occasion.

13.Binding Agreement. This document shall become effective and binding only upon the execution and delivery of this First Amendment by both Landlord and Tenant.

14.Counterparts and Authority. Landlord and Tenant each warrant to the other that the person or persons executing this First Amendment on its behalf has or have authority to do so and that such execution has fully obligated and bound such party to all terms and provisions of this First Amendment. This First Amendment may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of such counterparts shall constitute one document. Signature pages may be detached from the counterparts and attached to a single copy of this First Amendment to physically form one document. Facsimile, documents executed, scanned, and transmitted electronically and electronic signatures shall be deemed original signatures for purposes of this First Amendment, with such facsimile, scanned and electronic signatures having the same legal effect as original signatures. Pages may be executed and transmitted by facsimile or electronically and each of will be deemed an original. Landlord and

Tenant agree that this First Amendment may be accepted, executed or agreed to through the use of an electronic signature in accordance with the Electronic Signatures in Global and National Commerce Act ("**E-Sign Act**"), Title 15, United States Code, Sections 7001 et seq., the Uniform Electronic Transaction Act ("**UETA**") and any applicable state law. Any document accepted, executed, or agreed to in conformity with such laws will be binding on both Landlord and Tenant as if it were physically executed and delivered, and Tenant hereby consents to the use of any third-party electronic signature capture service providers as may be chosen by Landlord.

[Remainder of page intentionally left blank; Signatures on next page]

IN WITNESS WHEREOF, Landlord and Tenant have caused this First Amendment to be duly executed, under seal, by persons hereunto duly authorized, in multiple copies, each to be considered an original hereof, as of the Effective Date.

LANDLORD:

IQHQ-4 CORPORATE, LLC, a Delaware limited liability company

By: /s/ Tracy Murphy
Name: Tracy Murphy
Its: Co-CEO

TENANT:

GENERATE BIOMEDICINES, INC., a Delaware corporation

By: /s/ Sean Martin
Name: Sean Martin
Its: Chief Legal Officer

Exhibit 21.1

Subsidiaries of Generate Biomedicines, Inc.

Name	Jurisdiction
Generate Biomedicines Securities Corporation	Massachusetts