As filed with the Securities and Exchange Commission on July 9, 2021.

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

IMMUNEERING CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	2834	26-1976972
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

245 Main Street, Second Floor
Cambridge, Massachusetts 02142
Telephone: (617) 500-8080

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

Benjamin J. Zeskind, Ph.D.
Chief Executive Officer
Immuneering Corporation
245 Main Street, Second Floor
Cambridge, Massachusetts 02142
Telephone: (617) 500-8080

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

Copies to:

John Chory
Nathan Ajiashvili
Evan Smith
Latham & Watkins LLP
1271 Avenue of the Americas
New York, New York 10020
(212) 906-1200

Frank F. Rahmani
Samir A. Gandhi
Sidley Austin LLP
555 California Street, Suite 2000
San Francisco, California 94104
(415) 772-1200

Approximate date of commencement of proposed sale to the public:
As soon as practicable after this Registration Statement is declared 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, 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 checkmark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities To Be Registered	Proposed Maximum Aggregate Offering Price[(1)(2)]	Amount of Registration Fee[(3)]
Class A Common Stock, $0.001 par value per share	$100,000,000	$10,910.00

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

(2) Includes the aggregate offering price of additional shares that the underwriters have the option to purchase.

(3) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price.

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 or until the Registration Statement shall become effective on such date as the 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 where the offer or sale is not permitted.

SUBJECT TO COMPLETION,
DATED JULY 9, 2021

Shares

Immuneering Corporation

Class A Common Stock

We are offering shares of our Class A common stock. This is our initial public offering and no public market currently exists for our Class A common stock. We anticipate that the initial public offering price will be between $ and $ per share. We have applied to list our Class A common stock on the Nasdaq Global Market under the symbol "IMRX."

Following this offering, we will have two classes of common stock: Class A common stock and Class B common stock. The rights of the holders of Class A common stock and Class B common stock will be identical, except with respect to voting and conversion rights. Each share of Class A common stock will be entitled to one vote and will not be convertible into any other class of our capital stock. The shares of Class B common stock do not have associated voting rights (except as may be required by law) and each share of Class B common stock is convertible at any time at the election of the holder into one share of Class A common stock, subject to certain limitations. See "Description of Capital Stock—Common Stock" for more information on the rights of the holders of our Class A common stock and Class B common stock.

We are an "emerging growth company" as defined under the U.S. federal securities laws and, as such, may elect to comply with reduced public company reporting requirements for this and future filings. See "Prospectus Summary—Implications of Being an Emerging Growth Company and a Smaller Reporting Company."

Investing in our Class A common stock involves a high degree of risk. See "Risk Factors" beginning on page 13 of this prospectus.

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.

	Per share	***Total***
Initial public offering price	*$*	*$*
Underwriting discounts and commissions[(1)]	*$*	*$*
Proceeds, before expenses, to us	*$*	*$*

(1) See "Underwriting" for a description of all compensation payable to the underwriters. We have agreed to reimburse the underwriters for certain FINRA-related expenses.

We have granted the underwriters an option for a period of 30 days to purchase up to additional shares of Class A common stock.

The underwriters expect to deliver the shares of Class A common stock against payment in New York, New York on or about , 2021.

MORGAN STANLEY *JEFFERIES* *COWEN* *GUGGENHEIM SECURITIES*

Prospectus dated , 2021.

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Neither we nor the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares of Class A common stock offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained 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 Class A common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside the United States: Neither we nor the underwriters have 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 in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of Class A common stock and the distribution of this prospectus outside the United States.

BASIS OF PRESENTATION

Except where the context otherwise requires or where otherwise indicated, the terms “Immuneering,” “we,” “us,” “our,” “our company,” “Company” and “our business” refer to Immuneering Corporation.

The consolidated financial statements include the accounts of Immuneering Corporation and its subsidiary. Our financial statements have been prepared in accordance with generally accepted accounting principles in the United States, or GAAP. Our fiscal year ends on December 31 of each year. References to 2020 refer to the year ended December 31, 2020. Our most recent fiscal year ended on December 31, 2020.

Certain monetary amounts, percentages and other figures included in this prospectus have been subject to rounding adjustments. Percentage amounts included in this prospectus have not in all cases been calculated on the basis of such rounded figures, but on the basis of such amounts prior to rounding. For this reason, percentage amounts in this prospectus may vary from those obtained by performing the same calculations using the figures in our consolidated financial statements included elsewhere in this prospectus. Certain other amounts that appear in this prospectus may not sum due to rounding.

TRADEMARKS AND TRADENAMES

Solely for convenience, trademarks, service marks and tradenames referred to in this prospectus may appear without the ®, TM or SM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the right of the applicable licensor to these trademarks, service marks and tradenames. This prospectus may also contain trademarks, service marks, tradenames and copyrights of other companies, which are the property of their respective owners.

INDUSTRY AND OTHER DATA

This prospectus contains industry, market and competitive position data from our own internal estimates and research as well as industry and general publications and research surveys and studies conducted by independent third parties. Industry publications, studies and surveys generally state that they have been obtained from sources believe to be reliable. Our internal data and estimates are based upon information obtained from trade and business organizations and other contacts in the markets in which we operate and our management’s understanding of industry conditions. We believe our internal company research is reliable and the market definitions are appropriate. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in “Risk Factors”. These and other factors could cause results to differ materially from these expressed in the estimates made by the independent third parties and by us.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all of the information that you should consider before deciding to invest in our Class A common stock. You should read the entire prospectus carefully, including "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this prospectus, before making an investment decision. Some of the statements in this prospectus constitute forward-looking statements. See "Cautionary Note Regarding Forward-Looking Statements."

Overview

We are a biopharmaceutical company with an emerging pipeline focused on improving patient outcomes across a spectrum of debilitating oncologic and neurologic diseases by applying our deep knowledge of translational bioinformatics to every stage of the drug development process. We have more than a decade of experience in translational bioinformatics and generating insights into drug mechanisms of action and patient treatment responses. Building on this experience, we developed a disease-agnostic platform that enables us to utilize human data, novel biology and chemistry, and translational planning to create and advance our wholly owned pipeline. Our current development programs in oncology are focused on providing treatments for patients with solid tumors caused by mutations of the MAPK pathway and other oncologic signaling pathways. Our lead product candidate, IMM-1-104, is designed to be a highly selective dual-MEK inhibitor that further disrupts KSR for the treatment of advanced solid tumors in patients harboring RAS mutant tumors. We plan to submit an IND for IMM-1-104 to the FDA in the first quarter of 2022. In addition, we anticipate filing at least two additional INDs for our other oncology programs, one in each of 2023 and 2024.

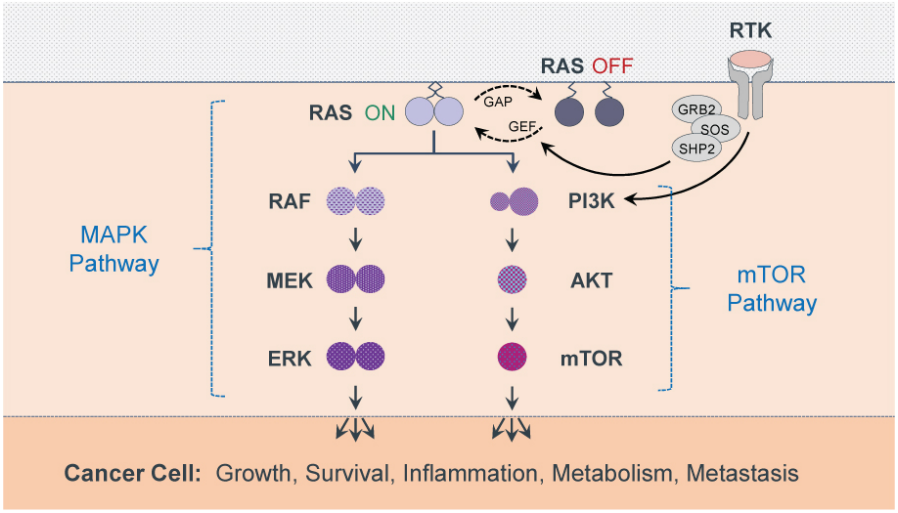
Our platform is enabled by our ability to efficiently analyze high-throughput molecular-level biochemical assays, including transcriptomics, genomics and/or proteomics, collectively referred to as Omics data. These different types of biochemical assays each provide us with unique information about the molecular mechanisms of disease biology and drug response. Since our inception, we have partnered with industry-leading pharmaceutical and biotechnology companies to perform a variety of analyses that utilize our expertise in translational bioinformatics. Examples publicly disclosed by our partners include our analyses of ibrutinib, ipilimumab, daratumumab, glatiramer acetate and pridopidine.

In early 2018, we began applying our proprietary platform and approach to internally develop our wholly owned pipeline of orally administered small molecule drug programs. Our approach played a critical role in determining the most important characteristics for and creation of IMM-1-104. Specifically, our platform enables us to:

- leverage insights from human data to identify disease transcriptional profiles we aim to counteract;
- identify novel biology, specifically evaluating new ways to drug an existing target by utilizing our proprietary Disease Cancelling Technology, or DCT, and analyze mechanisms of existing drugs;
- generate novel chemistry that overcomes MAPK-feedback loops to achieve optimal signaling dynamics; and
- profile IMM-1-104 in a large number of 3D models using our own translational planning to identify the types of cancer most likely to be sensitive to the product candidate.

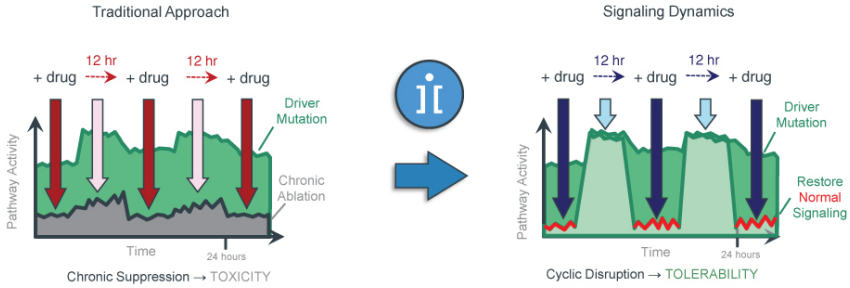
Our current oncology programs target mutations of the RAS/RAF/MEK/ERK, or MAPK, and the PI3K/AKT/mTOR, or mTOR, pathways. The MAPK and mTOR signaling pathways run parallel to each other, and in over half of all cancers, one or both of these pathways are inappropriately activated (as depicted below). Existing drugs targeting these pathways are limited by toxicity, resistance and/or are narrowly focused on subpopulations with specific mutations. The MAPK and mTOR pathways function to drive cell proliferation, differentiation, survival and a variety of other cellular functions that are critical for the formation of tumors.

Fundamental Cancer Signaling Cellular Pathways: MAPK and mTOR



Each of the programs in our oncology pipeline are designed to cause cyclical disruption of abnormal activation of the MAPK and mTOR signaling pathways while limiting drug-related toxicity. Traditional drug approaches have been designed to sustain pathway inhibition, which can cause on-target drug-related toxicity and limit clinical durability as a result of drug holidays or treatment discontinuation. Based on insights derived from our translational bioinformatics platform, our differentiated approach is to design drugs with short half-lives that provide enhanced mechanistic control of the target of interest and break tumor addiction, which is the tumor's ability to indefinitely self-replicate, metastasize and evade the host's immune system, among others capabilities, through deep cyclic disruption of these pathways (i.e., signaling dynamics). By cyclically disrupting these core oncogenic signaling pathways in cancer cells, we believe we can create novel therapeutics that maximize therapeutic activity in broad patient populations while providing an improved tolerability profile (as depicted below). We believe we are pioneers in this unique approach of leveraging signaling dynamics against tumor addiction.

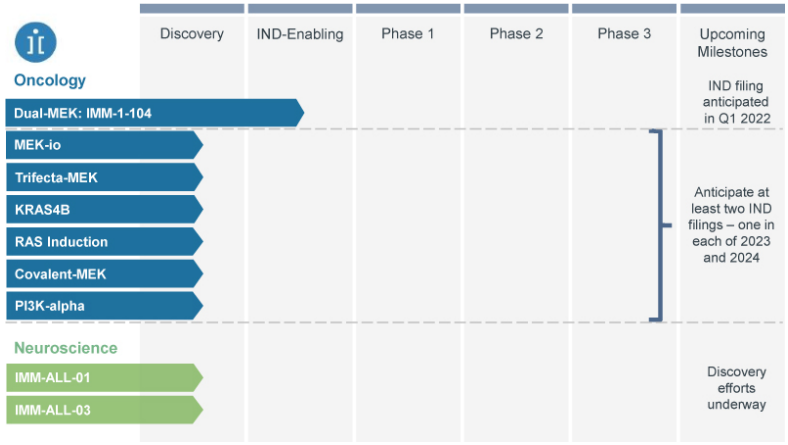
Signaling Dynamics: Traditional Sustained Inhibition Versus Our Cyclic Approach



Our Wholly Owned Pipeline

Our oncology programs target clinically validated pathways, but we seek to improve patient outcomes across a wide range of addressable solid tumor types through our differentiated programs. In addition to our

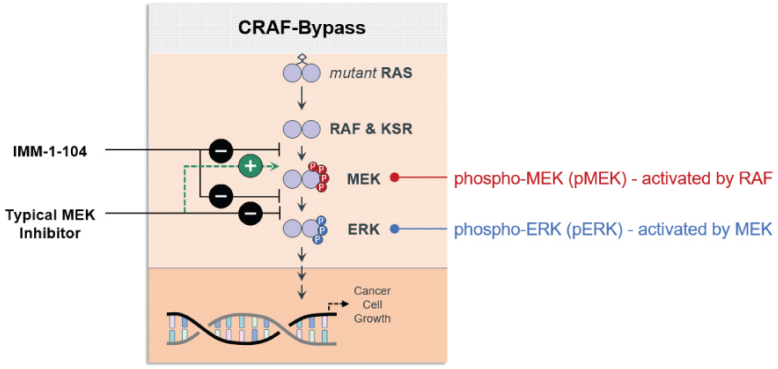
oncology pipeline, we are also leveraging our platform to build a neuroscience pipeline initially focusing on Alzheimer's disease, or AD. Our current pipeline of product candidates and discovery programs is depicted below.



Dual-MEK Program

Our dual mitogen-activated protein kinase kinase, or MEK, product candidate, IMM-1-104, is designed to be a highly selective inhibitor of mitogen-activated protein kinase kinase kinase, or ERK, activation (i.e., phosphorylation), prevent MAPK pathway reactivation and have a short plasma half-life that reduces sustained pathway inhibition (as depicted below). Unlike MEK inhibitors approved by the U.S. Food and Drug Administration, or the FDA, IMM-1-104 is designed to prevent RAF-mediated activation of MEK by engagement of the RAF activation loop on MEK, such as CRAF-bypass, and further disrupt the kinase suppressor of RAS 1 and 2, or KSR. Additionally, with a short plasma half-life, IMM-1-104 can achieve deep cyclic inhibition of the MAPK pathway. We believe this innovative method of pathway inhibition normalizes cancer cell signaling dynamics and prevents further damage to normal healthy cells. Collectively, we believe these qualities differentiate IMM-1-104 from known MEK inhibitors by potentially enabling IMM-1-104 to avoid drug resistance while improving tolerability.

Dual-MEK Inhibition Prevents Activation of MEK and Downstream Activation of ERK



In preclinical studies, we observed that IMM-1-104 inhibited MEK and ERK across a wide range of human and murine solid tumor models, including those with activating mutations in KRAS, NRAS, HRAS and BRAF. In addition, in head-to-head preclinical studies, we evaluated IMM-1-104 in murine-based KRAS and BRAF mutant solid tumor models representing lung, colon, pancreas and skin cancer, and observed tumor stasis or regression with insignificant lower body weight loss when compared to certain current FDA-approved MEK and BRAF inhibitors. We are also currently evaluating IMM-1-104 in a murine-based NRAS melanoma tumor model. Given the data observed in these preclinical studies, we believe that IMM-1-104 has the potential to deliver clinical benefit as monotherapy and, in the future, may potentially be administered in select drug combinations for patients with RAS and/or RAF mutant solid tumors who currently have limited treatment options.

IMM-1-104 is currently undergoing Investigational New Drug, or IND, enabling studies. We plan to submit an IND for IMM-1-104 to the FDA in the first quarter of 2022. We intend to initiate our first-in-human Phase 1 clinical trial of IMM-1-104 in the first half of 2022 for the treatment of advanced solid tumors in patients harboring RAS mutant tumors, if our IND for IMM-1-104 is accepted.

MEK-Immuno-Oncology and Other Oncology Programs

Our MEK-immuno-oncology, or MEK-io, program is focused on developing innovative allosteric MEK inhibitors to be administered in combination with select immune modulators (e.g., checkpoint inhibitors) for the treatment of “cold” solid tumors, which are immunologically inaccessible. Our investigational MEK-io program inhibitors are designed to target MEK in a way that disrupts the MAPK pathway at ERK and to also reduce baseline MEK activation. We are designing these inhibitors with unique pharmacokinetic, or PK, and pharmacodynamic, or PD, profiles that may enhance cycle inhibition time of MEK and ERK to optimize the patient’s immune response and promote maximal antitumor responses when administered in combination with select immune modulators.

We observed an initial *in vivo* proof-of-concept for our MEK-io program in a widely utilized syngeneic murine model. We evaluated one of our investigational MEK-io program inhibitors monotherapy and in combination with a checkpoint inhibitor as compared to vehicle to observe tumor growth inhibition in tumor-bearing BALB/C mice. Neither treatment alone altered tumor growth as compared to vehicle. However, when we administered our investigational MEK-io program inhibitor in combination with the checkpoint inhibitor, we observed greater than 50% tumor growth inhibition after two weeks of dosing as compared to vehicle treated mice.

Our MEK-io program is currently in the lead optimization stage of development and we are screening multiple advanced drug analogues for optimal PK and PD profiles that maximally modulate tumor growth inhibition through cyclic inhibition of MEK and ERK. Top candidates will be further evaluated in vivo for optimal drug-like properties that demonstrate synergistic tumor growth inhibition when combined with select immune modulators in preclinical cold solid tumor models.

We are leveraging our platform to continue expanding our oncology pipeline by targeting the MAPK and mTOR pathways in novel ways. We have five additional programs in various stages of drug discovery focused on targeting these pathways through novel pharmacological approaches.

In addition to the expected IND filing of IMM-1-104, we anticipate filing at least two additional INDs for our other oncology programs, one in each of 2023 and 2024.

Neuroscience Programs

AD is the most common form of dementia and one in three adults over the age of 65 succumb to AD-related dementia or another form of dementia. We believe there are specific subgroups of AD that can be stratified through gene expression and brain pathology. To identify AD subgroups, we have leveraged our platform to employ a patient-centric, data-driven approach. AD is a neurodegenerative disorder of uncertain cause and pathogenesis characterized by memory impairment and further cognitive decline that can ultimately affect the patient’s behavior, speech, visuospatial orientation and motor system. AD is a complex multifactorial disease driven by genetic and environmental causes that affects older adults and is one of the leading sources of

morbidity and mortality in the aging population. The estimated total healthcare costs for the treatment of AD was approximately $305 billion in 2020, with the cost expected to increase to more than $1 trillion by 2050.

Our neuroscience programs are in the early stages of drug discovery, and we are evaluating undisclosed targets to pursue a unique approach to treating AD. Our focus is to slow the progression of AD by developing targeted therapies for distinct biological mechanisms that we have identified in specific AD subgroups. Our platform and expertise in neurology and neuroscience have allowed us to determine biological differences in AD patients to help develop novel product candidates that may potentially address the significant unmet needs of this underserved patient population.

Our Team

We were founded in 2008 by our Chief Executive Officer and President, Benjamin J. Zeskind, Ph.D., and the Chairman of our board of directors, Robert J. Carpenter, with the goal of leveraging translational bioinformatics to generate insights into the mechanisms that cause certain patients to respond to specific medicines across multiple therapeutic areas. Our multi-disciplinary team brings together experts across translational bioinformatics, preclinical and clinical development in both oncology and neuroscience and includes individuals with extensive experience at some of the leading pharmaceutical companies, including Johnson & Johnson, AstraZeneca and Incyte. We are currently supported by a high-quality group of investors, including entities affiliated with Cormorant Asset Management, Surveyor Capital (a Citadel company), Rock Springs Capital and entities advised or sub-advised by T. Rowe Price Associates, Inc.

Our History

Our company is built on more than a decade of experience in translational bioinformatics. Since our founding in 2008, we have utilized this experience to generate insights into the mechanisms that cause certain patients to respond to specific medicines across therapeutic areas by analyzing Omics data. Our computational biology services business has helped us to better understand how translational bioinformatics can contribute to each stage of drug development, from early drug discovery to clinical development and through commercialization. However, we recognized the limitations of applying translational bioinformatics in isolation to specific stages of the drug development process and realized that bioinformatics could be even more helpful if applied continuously throughout the drug development process. Over time, we have developed a proprietary technology platform to facilitate that process and, in early 2018, we began applying the extensive insights from and capabilities of our platform and approach to create a wholly owned pipeline of drug programs, initially focusing on oncology.

Our Strategy

Our mission is to develop novel therapies by utilizing our disease-agnostic platform to address areas of high unmet medical need, initially in cancer and neurologic diseases. Our platform allows us to leverage human biological data to generate insights that are not constrained by the inherent limitations of conventional approaches or prevailing scientific views. We are developing novel product candidates that aim to optimize both safety and efficacy for diseases with suboptimal treatment options. To achieve our mission, we are executing a near-term strategy with the following key elements:

- ***Advance IMM-1-104 into Clinical Development.***
- ***Progress Our Pipeline of Additional MAPK and mTOR Pathway Programs to IND-Enabling Studies.***
- ***Utilize Our Platform to Advance Our Neuroscience Programs.***
- ***Continue to Grow and Advance Our Platform.***

Summary Risk Factors

Investing in our Class A common stock involves substantial risk. Our ability to execute our strategy is also subject to certain risks. The risks described under the heading “Risk Factors” included elsewhere in this prospectus may cause us not to realize the full benefits of our strengths or may cause us to be unable to successfully execute all or part of our strategy. Some of the most significant challenges and risks include the following:

- We have a limited operating history, have not completed any clinical trials and have no products approved for commercial sale, which may make it difficult for you to evaluate our current business and predict our future success and viability.
- We have incurred significant net losses for the past several years and we expect to continue to incur significant net losses for the foreseeable future and may never maintain profitability.
- Even if this offering is successful, we will require substantial additional capital to finance our operations. If we are unable to raise such capital when needed, or on acceptable terms, we may be forced to delay, reduce and/or eliminate one or more of our research and drug development programs or future commercialization efforts.
- The regulatory approval processes of the FDA and other comparable foreign regulatory authorities are lengthy, time consuming and inherently unpredictable. If we are ultimately unable to obtain regulatory approval for our product candidates, or to obtain regulatory approval to treat the indications we seek to treat with our product candidates, we will be unable to generate product revenue or the level of planned product revenue and our business will be substantially harmed.
- We may encounter substantial delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.
- The outcome of preclinical studies and early clinical trials may not be predictive of the success of later clinical trials, and the results of our clinical trials may not satisfy the requirements of the FDA or other comparable foreign regulatory authorities.
- Our current or future product candidates may cause adverse events, toxicities or other undesirable side effects when used alone or in combination with other approved products or investigational new drugs that may result in a safety profile that could inhibit regulatory approval, prevent market acceptance, limit their commercial potential or result in significant negative consequences.
- We are early in our development efforts. Our business is substantially dependent on the successful development of our current and future product candidates. If we are unable to advance our current or future product candidates through clinical trials, obtain marketing approval to treat the indications we seek to treat with our product candidates, and ultimately commercialize any product candidates we develop, or experience significant delays in doing so, our business will be materially harmed.
- We are substantially dependent on our platform, including our proprietary technologies such as DCT and Fluency, which are supported by our information technology systems. Any failure of these or other elements of our platform will materially harm our business.
- Our long-term prospects depend in part upon discovering, developing and commercializing product candidates, which may fail in development or suffer delays that adversely affect their commercial viability.
- Our approach to the discovery and development of product candidates is unproven, and we may not be successful in our efforts to use and expand our DCT platform to build a pipeline of product candidates with commercial value.
- We have never commercialized a product candidate before and may lack the necessary expertise, personnel and resources to successfully commercialize any products on our own or together with suitable collaborators.
- We face significant competition, and if our competitors develop and market technologies or products more rapidly than we do or that are more effective, safer or less expensive than the product candidates we develop, our commercial opportunities will be negatively impacted.
- The COVID-19 pandemic and potential future pandemics could continue to adversely impact our business, including our anticipated clinical trials, supply chain and business development activities.
- We substantially rely, and expect to continue to rely, on third parties, including independent clinical investigators and contract research organizations, or CROs, to conduct certain aspects of our preclinical studies, and in the future, our clinical trials. If these third parties do not successfully carry out their contractual duties, comply with applicable regulatory requirements or meet expected

deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.

- We contract with third parties for the manufacture of our product candidates for preclinical studies, and expect to continue to do so for clinical trials and ultimately, for commercialization of any approved product candidate. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or drugs or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.
- The manufacture of drugs is complex and our third-party manufacturers may encounter difficulties in production. If any of our third-party manufacturers encounter such difficulties, our ability to provide adequate supply of our product candidates for clinical trials or our products for patients, if approved, could be delayed or prevented.
- If we are unable to obtain and maintain patent and other intellectual property protection for our product candidates and technologies or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products and technology similar or identical to ours, and our ability to successfully commercialize our products and technology may be impaired, and we may not be able to compete effectively in our market.

Corporate Information

Our corporate headquarters are located at 245 Main Street, Second Floor, Cambridge, Massachusetts 02142. Our telephone number is (617) 500-8080. Our principal website address is *www.immuneering.com*. The information on or accessed through our website is not incorporated in this prospectus or the registration statement of which this prospectus forms a part.

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, or JOBS Act. As an "emerging growth company" we may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- the option to present only two years of audited financial statements and only two years of related "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act;
- not being required to comply with any requirements that may be adopted by the Public Company Accounting Oversight Board regarding the communication of critical audit matters in the auditor's report on financial statements;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions until the last day of our fiscal year following the fifth anniversary of the completion of this offering. However, if any of the following events occur prior to the end of such five-year period, (i) our annual gross revenue exceeds $1.07 billion, (ii) we issue more than $1.0 billion of non-convertible debt in any three-year period, or (iii) we become a "large accelerated filer," (as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended, or the Exchange Act), we will cease to be an emerging growth company prior to the end of such five-year period. We will be deemed to be a "large accelerated filer" at such time that we (a) have an aggregate worldwide market value of common equity securities held by non-affiliates of $700.0 million or more as of the last business day of our most recently completed second fiscal quarter, (b) have been required to file annual and quarterly reports under the Exchange Act, for a period of at least 12 months, and (c) have filed at least one annual report pursuant to the Exchange

Act. Even after we no longer qualify as an emerging growth company, we may still qualify as a "smaller reporting company," which would allow us to take advantage of many of the same exemptions from disclosure requirements including reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements.

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. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies. In particular, we have elected to use the extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company, or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates. If we were to subsequently elect instead to comply with these public company effective dates, such election would be irrevocable pursuant to the JOBS Act.

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 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	
Class A common stock offered by us	shares (or shares if the underwriters exercise their option to purchase additional shares in full).
Option to purchase additional shares	We have granted the underwriters an option for a period of 30 days to purchase up to additional shares of Class A common stock.
Class A common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise their option to purchase additional shares in full).
Class B common stock to be outstanding immediately after this offering	No shares of Class B common stock outstanding.
Use of proceeds	We estimate that the net proceeds from this offering will be approximately $ million (or approximately $ million if the underwriters exercise their option to purchase additional shares in full), based on an assumed initial public offering price of $ per share, which is the midpoint of the 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 anticipate that we will use the net proceeds of this offering to advance the development of IMM-1-104 and advance the preclinical development of our other programs and for working capital and other general corporate purposes. For a more complete description of our intended use of the proceeds from this offering, see "Use of Proceeds."
Voting rights	Following the closing of this offering, we will have two classes of common stock, Class A common stock and Class B common stock. Holders of our Class A common stock will be entitled to one vote per share and the Class A common stock will not be convertible into any other class of our capital stock. The Class B common stock will not confer upon their holders any voting rights (except as may be required by law) and each Class B common stock will be convertible at any time following the closing of this offering, at the election of the holder, into one Class A common stock, subject to certain beneficial ownership limitations. The Class B common stock, once converted to Class A common stock, may not be converted back to Class B common stock. See "Description of Capital Stock—Common Stock" for more information on the rights of the holders of our Class A common stock and Class B common stock.
Risk factors	You should read the section titled "Risk Factors" beginning on page 13 and the other information included in this prospectus for a discussion of factors you should consider carefully before deciding to invest in our Class A common stock.
Directed share program	At our request, Morgan Stanley & Co. LLC and its affiliates, or the DSP Underwriter, has reserved for sale, at the initial public offering price, up to % of the shares of our Class A common stock offered hereby for officers, directors, employees and certain related persons. Any directed shares

	not purchased will be offered by the DPS Underwriter to the general public on the same basis as all other shares offered by this prospectus. We have agreed to indemnify the DSP Underwriter against certain liabilities and expenses, including liabilities under the Securities Act, in connection with the sales of the directed shares. See "Underwriting—Directed Share Program."
Dividend policy	We do not currently pay dividends and we do not anticipate declaring or paying any dividends for the foreseeable future.
Proposed Nasdaq Global Market symbol	"IMRX."

The number of shares of Class A common stock to be outstanding after this offering is based on shares of our Class A common stock outstanding as of March 31, 2021, and includes an additional shares of our Class A common stock issuable upon the conversion of all outstanding shares of our preferred stock on a one-for-one basis immediately prior to the closing of this offering into shares of Class A common stock, subject to certain beneficial ownership limitations, and excludes:

- shares of Class A common stock issuable upon exercise of outstanding stock options granted under the Immuneering Corporation Long Term Incentive Plan, or the 2015 Plan, as of March 31, 2021, at a weighted average exercise price of $ per share;
- shares of Class A common stock available for future issuance under the 2015 Plan, as of March 31, 2021, which such shares will cease to be available for issuance at the time our 2021 Plan (as defined below) becomes effective;
- shares of our Class A common stock that will become available for future issuance under the 2021 Incentive Award Plan, or the 2021 Plan, which will become effective in connection with the completion of this offering, as well as any automatic increases in the number of shares of our Class A common stock reserved for future issuance under the 2021 Plan; and
- shares of Class A common stock that will become available for future issuance under the employee stock purchase plan, or the ESPP, which will become effective in connection with this offering, and shares of our Class A common stock that become available pursuant to provisions in the ESPP that automatically increase the share reserve under the ESPP.

Unless we indicate otherwise or the context otherwise requires, all information in this prospectus assumes or gives effect to:

- the filing and effectiveness of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, each of which will occur immediately prior to the closing of this offering;
- the conversion of all outstanding shares of our Series A convertible preferred stock, or Series A Preferred Stock, and Series B convertible preferred stock, or Series B Preferred Stock, into shares of our Class A common stock immediately prior to the closing of this offering;
- a for split of our common stock, effected on , 2021;
- no exercise of the outstanding stock options or restricted stock units, or RSUs, described above after March 31, 2021;
- no issuances of Class B common stock upon the closing of this offering;
- no exercise by the underwriters of their option to purchase up to additional shares of Class A common stock; and
- an assumed initial public offering price of $ per share of Class A common stock, which is the midpoint of the price range set forth on the cover page of this prospectus.

SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables set forth our summary consolidated financial data for the periods indicated. We have derived the summary consolidated statements of operations data for the three months ended March 31, 2021 and 2020 and the summary consolidated balance sheet data as of March 31, 2021 from our unaudited interim condensed consolidated financial statements included elsewhere in this prospectus. We have derived the consolidated statements of operations data for the years ended December 31, 2020 and 2019, and the consolidated balance sheet data as of December 31, 2020, from our audited consolidated financial statements included elsewhere in this prospectus. We have prepared the unaudited interim condensed consolidated financial statements on a basis substantially consistent with our audited consolidated financial statements as of and for the year ended December 31, 2020, and the unaudited interim condensed consolidated financial statements include all normal recurring adjustments necessary for a fair statement of the financial information set forth in those unaudited interim condensed consolidated financial statements. Our historical results are not necessarily indicative of the results that should be expected for any future period. You should read the following summary consolidated financial data together with the more detailed information contained in "Selected Consolidated Financial Data," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this prospectus. Our historical results for any prior period are not necessarily indicative of our future results, and our operating results for the three-month period ended March 31, 2021 are not necessarily indicative of the results that may be expected for the year ending December 31, 2021 or any other interim periods or any future year or period.

	Three Months Ended March 31,		Year Ended December 31,	
	2021	2020	2020	2019
	(in thousands, except share and per share amounts)			
Consolidated Statements of Operations Data:				
Revenue	$ 748	$ 483	$ 2,311	$ 1,920
Cost of revenue	409	255	1,280	1,223
Gross profit	339	228	1,031	697
Operating expenses				
Research and development	5,391	2,823	15,004	4,279
General and administrative	1,184	644	3,110	2,709
Total operating expenses	6,575	3,467	18,114	6,988
Loss from operations	(6,236)	(3,239)	(17,083)	(6,291)
Other income (expense), net				
Interest income (expense), net	6	38	43	(293)
Loss on conversion of convertible notes	—	—	—	(1,125)
Net loss	$ (6,230)	$ (3,201)	$ (17,040)	$ (7,709)
Net loss per share attributable to common stockholders, basic and diluted	$ (1.76)	$ (0.91)	$ (4.82)	$ (2.18)
Weighted-average common shares outstanding used to compute net loss per share, basic and diluted[1][2]	3,535,811	3,535,811	3,535,811	3,535,811
Pro Forma net loss per share attributable to common shareholders, basic and diluted[3]	$ (0.65)		$ (2.78)	
Pro Forma weighted average shares outstanding used to compute pro forma net loss per share, basic and diluted[3]	9,651,036		6,127,858	

(1) See Note 7 to our unaudited interim consolidated financial statements for the three months ended March 31, 2021 and 2020 appearing at the end of this prospectus for further details on the calculation of basic and diluted net loss per share attributable to common stockholders.

(2) See Note 8 to our consolidated financial statements for the years ended December 31, 2020 and 2019 appearing at the end of this prospectus for further details on the calculation of basic and diluted net loss per share attributable to common stockholders.

(3) The unaudited pro forma net loss per share for the three months ended March 31, 2021 and for the year ended December 31, 2020 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all outstanding shares of Series A Preferred Stock and Series B Preferred Stock into shares of common stock, as if such conversion had occurred at the beginning of the period, or their issuance dates, if later. The information presented in this table does not give effect to the sale and issuance of our Series B Preferred Stock that occurred in April and May 2021.

	As of March 31, 2021		
	Actual	Pro Forma[1]	Pro Forma As Adjusted[2]
		(in thousands)	
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 30,934	$	$
Working capital[3]	29,425		
Total assets	32,857		
Total liabilities	3,282		
Convertible preferred stock	58,104		
Accumulated deficit	(31,967)		
Total stockholders' equity (deficit)	(28,529)		

(1) Gives effect to (i) the receipt of approximately $24.8 million in aggregate net proceeds from the issuance and sale of our Series B Preferred Stock that occurred in April and May 2021, and (ii) the conversion of all of the outstanding shares of our Series A Preferred Stock and Series B Preferred Stock into an aggregate of shares of our Class A common stock (and no shares of Class B common stock) upon the closing of this offering, as if such conversion had occurred on March 31, 2021.

(2) Gives further effect to the sale of shares of Class A common stock in this offering at an assumed initial public offering price of $ per share (which is the midpoint of the price range set forth on the cover page of this prospectus), after deducting the estimated underwriting fees and commissions and estimated offering expenses payable by us.

(3) We define working capital as current assets less current liabilities.

The pro forma as adjusted balance sheet data give further effect to our issuance and sale of shares of our Class A common stock in this offering at an assumed initial public offering price of $ per share (which is the midpoint of the 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. Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share (which is the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and total stockholders' equity by $ million, 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase (decrease) of 1.0 million shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and total stockholders' equity 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.

RISK FACTORS

You should carefully consider the risks and uncertainties described below and the other information in this prospectus, including our consolidated financial statements and related notes appearing elsewhere in this prospectus and in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations," before deciding whether to invest in our Class A common stock. Our business, financial condition, results of operations or prospects could be materially and adversely affected if any of these risks occurs, and as a result, the market price of our Class A common stock could decline and you could lose all or part of your investment. This prospectus also contains forward-looking statements that involve risks and uncertainties. See "Cautionary Note Regarding Forward-Looking Statements." Our actual results could differ materially and adversely from those anticipated in these forward-looking statements as a result of certain factors, including those set forth below.

Risks Related to Our Financial Condition and Capital Requirements

We have a limited operating history in developing pharmaceutical products, have not completed any clinical trials and have no products approved for commercial sale, which may make it difficult for you to evaluate our current business and predict our future success and viability.

Pharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. We are a biopharmaceutical company with a limited operating history in developing pharmaceutical products which makes it difficult to evaluate our business and prospects in future product development. We have no products approved for commercial sale and have not generated any revenue from product sales. To date, we have devoted substantially all of our resources and efforts to providing computational biology services to pharmaceutical and biotechnology companies, organizing and staffing our company, business planning, executing partnerships, raising capital, discovering, identifying and developing potential product candidates, securing related intellectual property rights and undertaking research and preclinical studies of our product candidates, including the anticipated Phase 1 clinical trial of IMM-1-104 for the treatment of advanced solid tumors in patients harboring RAS mutant tumors. We have not yet demonstrated our ability to successfully initiate any clinical trials, obtain marketing approvals, manufacture a commercial-scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. As a result, it may be more difficult for you to accurately predict our future success or viability to develop new pharmaceutical products than it could be if we had a longer operating history.

In addition, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors and risks frequently experienced by biopharmaceutical companies developing products in rapidly evolving fields. We also may need to transition from a company with a research focus to a company capable of supporting commercial activities. If we do not adequately address these risks and difficulties or successfully make such a transition, our business will suffer.

We have incurred significant net losses for the past several years and we expect to continue to incur significant net losses for the foreseeable future and may never maintain profitability.

We have incurred net losses in each reporting period for the past several years, have not generated any revenue from product sales to date and have financed our operations principally through our computational biology services to pharmaceutical and biotechnology companies, the issuance of convertible debt and the sale of our convertible preferred stock and Class A common stock. We have incurred net losses of approximately $17.0 million and $7.7 million for the years ended December 31, 2020 and 2019, respectively, and net loss of approximately $6.2 million for the three months ended March 31, 2021. As of March 31, 2021, we had an accumulated deficit of approximately $32.0 million. Our losses have resulted principally from expenses incurred in research and development of our product candidates, from management and administrative costs and other expenses that we have incurred while building our business infrastructure. Our lead product candidate, IMM-1-104, is undergoing IND-enabling studies and we expect to submit an IND to the FDA in the first quarter of 2022. We intend to initiate a Phase 1 clinical trial of IMM-1-104 in the first half of 2022 for the treatment of advanced solid tumors in patients harboring RAS mutant tumors, if our IND for IMM-1-104 is accepted. Our other product candidates are in earlier stages of drug development. As a result, we expect that it will be several years, if ever, before we have a commercialized product and generate revenue from product

sales. Even if we succeed in receiving marketing approval for and commercializing one or more of our product candidates, we expect that we will continue to incur substantial research and development and other expenses as we discover, develop and market additional potential product candidates.

We expect to continue to incur significant losses for the foreseeable future, and we expect these losses to increase substantially if and as we:

- advance the development of our lead product candidate, IMM-1-104, and our other product candidates through preclinical and clinical development, and, if approved by the FDA or other comparable foreign regulatory authorities, commercialization;
- incur manufacturing costs for our product candidates;
- seek regulatory approvals for any of our product candidates that successfully complete clinical trials;
- increase our research and development activities to identify and develop new product candidates;
- hire additional personnel;
- expand our operational, financial and management systems;
- invest in measures to protect and expand our intellectual property;
- establish a sales, marketing, medical affairs and distribution infrastructure to commercialize any product candidates for which we may obtain marketing approval and intend to commercialize;
- expand our manufacturing and develop our commercialization efforts; and
- operate as a public company.

The net losses we incur may fluctuate significantly from quarter to quarter such that a period-to-period comparison of our results of operations may not be a good indication of our future performance. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our working capital and our ability to achieve and maintain profitability.

Even if this offering is successful, we will require substantial additional capital to finance our operations. If we are unable to raise such capital when needed, or on acceptable terms, we may be forced to delay, reduce and/or eliminate one or more of our research and drug development programs or future commercialization efforts.

Developing pharmaceutical products, including conducting preclinical studies and clinical trials, is a very time-consuming, expensive and uncertain process that takes years to complete. Our operations have consumed substantial amounts of cash since inception, and we expect our expenses to increase in connection with our ongoing activities, particularly as we initiate and conduct clinical trials of, and seek marketing approval for our current and any future product candidates. Even if one or more of the product candidates that we develop is approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved product candidate. Our expenses could increase beyond expectations if we are required by the FDA or other comparable foreign regulatory authorities to perform clinical trials or preclinical studies in addition to those that we currently anticipate. Other unanticipated costs may also arise. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to drug sales, marketing, manufacturing and distribution. Because the design and outcome of our anticipated clinical trials are highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of any product candidate we develop. Following this offering, we also expect to incur additional costs associated with operating as a public company. Accordingly, it is likely that we will need to obtain substantial additional funding in order to maintain our continuing operations in the future.

As of March 31, 2021, we had approximately $30.9 million in cash and cash equivalents. Based on our current business plans, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will be sufficient to fund our operating expenses and capital expenditures requirements through December 31, 2023. Our estimate as to how long we expect the net proceeds from this offering, together with our existing cash and cash equivalents, to be able to continue to fund our operating expenses and capital

expenditures requirements is based on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Changing circumstances, some of which may be beyond our control, could cause us to consume capital significantly faster than we currently anticipate, and we may need to seek additional funds sooner than planned.

Our future funding requirements will depend on many factors, including, but not limited to:

- the initiation, progress, timeline, cost and results of our clinical trials for our product candidates;
- the initiation, progress, timeline, cost and results of additional research and preclinical studies related to pipeline development and other research programs we initiate in the future;
- the cost and timing of manufacturing activities as we advance our product candidates through preclinical and clinical development, and commercialization;
- the potential expansion of our current development programs to seek new indications;
- the continued negative impact of the COVID-19 pandemic or future pandemics on our business;
- the outcome, timing and cost of meeting regulatory requirements established by the FDA and other comparable foreign regulatory authorities;
- the cost of filing, prosecuting, defending and enforcing patent claims and other intellectual property rights, in-licensed or otherwise;
- the effect of competing technological and market developments;
- the payment of licensing fees, potential royalty payments and potential milestone payments;
- the cost of general operating expenses;
- the cost and timing of completion of commercial-scale manufacturing activities;
- the cost of establishing sales, marketing, and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products on our own; and
- the cost of operating as a public company.

We plan to use the net proceeds from this offering to advance IMM-1-104 into clinical development, including to fund our anticipated Phase 1 clinical trial of IMM-1-104 for the treatment of advanced solid tumors in patients harboring RAS mutant tumors, and additional clinical trials; advance our other preclinical drug programs and the design and development of new product candidates, in oncology and neuroscience, and to advance these programs into IND-enabling studies that would support an IND filing for one or more product candidates; and for working capital and other general corporate purposes, including the continued advancement of our platform and hiring of additional staff as we expand our operations. Advancing the development of our product candidates will require a significant amount of capital. The net proceeds from this offering and our existing cash and cash equivalents will not be sufficient to fund all of the activities that are necessary to complete the development of our product candidates.

We will be required to obtain further funding through public or private equity offerings, debt financings, collaborations and licensing arrangements or other sources, which may dilute our stockholders or restrict our operating activities. We do not have any committed external source of funds. Adequate additional financing may not be available to us on acceptable terms, or at all. Additionally, the impact of the COVID-19 pandemic on the capital markets may affect the availability, amount and type of financing available to us in the future. Our failure to raise capital as and when needed or on acceptable terms would have a negative impact on our financial condition and our ability to pursue our business strategy, and we may have to delay, reduce the scope of, suspend or eliminate one or more of our research-stage programs, clinical trials or future commercialization efforts.

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

We may seek additional capital through a variety of means, including through public or private equity offering, debt financings or other sources, including up-front payments and milestone payments from strategic

collaborations. To the extent that we raise additional capital through the sale of equity or convertible debt or equity securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. Such financing may result in dilution to stockholders, imposition of debt covenants, increased fixed payment obligations or other restrictions that may affect our business. If we raise additional funds through up-front payments or milestone payments pursuant to strategic collaborations with third parties, we may have to relinquish valuable rights to our product candidates, or grant licenses on terms that are not favorable to us. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans.

Our ability to use our net operating losses and other tax attributes may be limited.

As of December 31, 2020, we had approximately $22.0 million of federal and $14.3 million of state net operating loss carryforwards, or NOLs, available to offset future taxable income. Under Sections 382 and 383 of the U.S. Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change," generally defined as a greater than 50% change by value in its equity ownership over a three-year period is subject to limitations on its ability to utilize its pre-change NOLs and other tax attributes such as research tax credits to offset future taxable income. We have not performed an analysis to determine whether our past issuances of stock and other changes in our stock ownership may have resulted in other ownership changes. If it is determined that we have in the past experienced other ownership changes, or if we undergo one or more ownership changes as a result of this offering or future transactions in our stock, which may be outside our control, then our ability to utilize NOLs and other pre-change tax attributes could be further limited by Sections 382 and 383 of the Code, and certain of our NOLs and other pre-change tax attributes may expire unused. As a result, if or when we earn net taxable income, our ability to use our pre-change NOLs or other tax attributes to offset such taxable income or otherwise reduce any liability for income taxes may be subject to limitations, which could adversely affect our future cash flows.

Risks Related to Development, Regulatory Approval and Commercialization

The regulatory approval processes of the FDA and other comparable foreign regulatory authorities are lengthy, time consuming and inherently unpredictable. If we are ultimately unable to obtain regulatory approval for our product candidates, or to obtain regulatory approval to treat the indications we seek to treat with our product candidates, we will be unable to generate product revenue or the level of planned product revenue and our business will be substantially harmed.

We are not permitted to commercialize, market, promote or sell any product candidate in the United States without obtaining marketing approval from the FDA. Foreign regulatory authorities impose similar requirements. The time required to obtain approval by the FDA and other comparable foreign regulatory authorities is unpredictable, typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the type, complexity and novelty of the product candidates involved. In addition, approval policies, regulations or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions, which may cause delays in the approval or the decision not to approve an application. 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 data. Even if we eventually complete clinical testing and receive approval of any regulatory filing for our product candidates, the FDA and other comparable foreign regulatory authorities may approve our product candidates for a more limited indication or a narrower patient population than we originally requested. We have not submitted for, or obtained, regulatory approval for any product candidate, and it is possible that none of our existing product candidates or any product candidates we may seek to develop in the future will ever obtain regulatory approval.

Further, development of our product candidates and/or regulatory approval may be delayed for reasons beyond our control. For example, a U.S. federal government shutdown or budget sequestration, such as ones that occurred during 2013, 2018 and 2019, may result in significant reductions to the FDA's budget, employees and operations, which may lead to slower response times and longer review periods, potentially affecting our ability to progress development of our product candidates or obtain regulatory approval for our product candidates.

Applications for our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or other comparable foreign regulatory authorities may disagree with the design, implementation or results of our clinical trials;
- the FDA or other comparable foreign regulatory authorities may determine that our product candidates are not safe and effective, only moderately effective or have undesirable or unintended side effects, toxicities or other characteristics that preclude our obtaining marketing approval or prevent or limit commercial use;
- the population studied in the clinical trial may not be sufficiently broad or representative to assure efficacy and safety in the full population for which we seek approval;
- the FDA or other comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of a New Drug Application, or NDA, or other submission or to obtain regulatory approval in the United States or elsewhere;
- we may be unable to demonstrate to the FDA or other comparable foreign regulatory authorities that a product candidate's risk-benefit ratio for its proposed indication is acceptable;
- the FDA or other comparable foreign regulatory authorities may fail to approve the manufacturing processes, test procedures and specifications or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or other comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

This lengthy approval process, as well as the unpredictability of the results of clinical trials, may result in our failing to obtain regulatory approval to market any of our product candidates, which would significantly harm our business, results of operations and prospects. In addition, the FDA or comparable foreign regulatory authorities may change their policies, adopt additional regulations or revise existing regulations or take other actions, which may prevent or delay approval of our future product candidates under development on a timely basis. Such policy or regulatory changes could impose additional requirements upon us that could delay our ability to obtain approvals, increase the costs of compliance or restrict our ability to maintain any marketing authorizations we may have obtained.

In addition, even if we obtain approval of our product candidates, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may impose significant limitations in the form of narrow indications, warnings, or a Risk Evaluation and Mitigation Strategy, or REMS. Regulatory authorities may not approve the price we intend to charge for products we may develop, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could seriously harm our business.

We may not be able to file INDs or IND amendments or comparable documents in foreign jurisdictions to commence additional clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit us to proceed.

While we plan to submit INDs or comparable documents for our potential product candidates, we may not be able to file such INDs or comparable documents on the timeline we expect. For example, we may experience manufacturing delays or other delays with IND-enabling studies. Moreover, we cannot be sure that submission of an IND or comparable document will result in the FDA or other comparable foreign regulatory authorities allowing further clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate clinical trials. Additionally, even if such regulatory authorities agree with the design and implementation of the clinical trials set forth in an IND, we cannot guarantee that such regulatory authorities will not change their requirements in the future. These considerations also apply to new clinical trials we may submit as

amendments to existing INDs or to a new IND. Any failure to file INDs on the timelines we expect or to obtain regulatory approvals for our trials may prevent us from completing our clinical trials or commercializing our products on a timely basis, if at all.

Our company has limited experience in designing clinical trials and may experience delays or unexpected difficulties in obtaining regulatory approval for our current and future product candidates.

We have limited experience in designing clinical trials and may be unable to design and execute a clinical trial to support marketing approval. We cannot be certain that our planned clinical trials or any future clinical trials will be successful. It is possible that the FDA may refuse to accept any or all of our planned NDAs for substantive review or may conclude after review of our data that our application is insufficient to obtain regulatory approval for any product candidates. If the FDA does not approve any of our planned NDAs, it may require that we conduct additional costly clinical trials, preclinical studies or manufacturing validation studies before it will reconsider our applications. Depending on the extent of these or any other FDA-required studies, approval of any NDA or other application that we submit may be significantly delayed, possibly for several years, or may require us to expend more resources than we have available. Any failure or delay in obtaining regulatory approvals would prevent us from commercializing our product candidates, generating revenues and achieving and sustaining profitability. It is also possible that additional studies, if performed and completed, may not be considered sufficient by the FDA to approve any NDA or other application that we submit. If any of these outcomes occur, we may be forced to abandon the development of our product candidates, which would materially adversely affect our business and could potentially cause us to cease operations. We face similar risks for our applications in foreign jurisdictions.

We may encounter substantial delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

Before obtaining marketing approval from the FDA or other comparable foreign regulatory authorities for the sale of our product candidates, we must complete preclinical development and extensive clinical trials to demonstrate the safety and efficacy of our product candidates. Clinical testing is expensive, difficult to design and implement, can take many years to complete and its ultimate outcome is uncertain. A failure of one or more clinical trials can occur at any stage of the process. The outcome of preclinical studies and early-stage clinical trials may not be predictive of the success of later clinical trials. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their drugs. The outcome of preclinical studies and early-stage clinical trials may not be predictive of the success of later clinical trials.

In addition, we are substantially dependent on preclinical, clinical and quality data generated by CROs and other third parties for regulatory submissions for our product candidates. While we have or will have agreements governing these third parties' services, we have limited influence over their actual performance. If these third parties do not make data available to us, or, if applicable, make regulatory submissions in a timely manner, in each case pursuant to our agreements with them, our development programs may be significantly delayed, and we may need to conduct additional studies or collect additional data independently. In either case, our development costs would increase, perhaps substantially.

We do not know whether our future clinical trials will begin on time or enroll patients on time, or whether our future clinical trials will be completed on schedule or at all. Clinical trials can be delayed for a variety of reasons, including delays related to:

- the FDA or comparable foreign regulatory authorities disagreeing as to the design or implementation of our clinical studies;
- obtaining regulatory authorizations to commence a trial or reaching a consensus with regulatory authorities on trial design;
- any failure or delay in reaching an agreement with CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- obtaining approval from one or more institutional review boards, or IRBs;

- IRBs refusing to approve, suspending or terminating the trial at an investigational site, precluding enrollment of additional subjects, or withdrawing their approval of the trial;
- delays in enrollment due to travel or quarantine policies, or other factors related to COVID-19, other pandemics or other events outside our control;
- changes to clinical trial protocol;
- clinical sites deviating from trial protocol or dropping out of a trial;
- manufacturing sufficient quantities of product candidates or obtaining sufficient quantities of combination therapies for use in clinical trials;
- subjects failing to enroll or remain in our trial at the rate we expect, or failing to return for post-treatment follow-up;
- subjects choosing an alternative treatment for the indication for which we are developing our product candidates, or participating in competing clinical trials;
- lack of adequate funding to continue the clinical trial;
- subjects experiencing severe or unexpected drug-related adverse effects;
- occurrence of serious adverse events in trials of the same class of agents conducted by other companies;
- selection of clinical end points that require prolonged periods of clinical observation or analysis of the resulting data;
- a facility manufacturing our product candidates or any of their components being ordered by the FDA or comparable foreign regulatory authorities to temporarily or permanently shut down due to violations of current good manufacturing practice, or cGMP, regulations or other applicable requirements, or infections or cross-contaminations of product candidates in the manufacturing process;
- any changes to our manufacturing process that may be necessary or desired;
- third-party clinical investigators losing the licenses or permits necessary to perform our clinical trials, not performing our clinical trials on our anticipated schedule or consistent with the clinical trial protocol, good clinical practices, or GCP, or other regulatory requirements;
- third-party contractors not performing data collection or analysis in a timely or accurate manner; or
- third-party contractors becoming debarred or suspended or otherwise penalized by the FDA or other government or regulatory authorities for violations of regulatory requirements, in which case we may need to find a substitute contractor, and we may not be able to use some or all of the data produced by such contractors in support of our marketing applications.

For instance, the ongoing COVID-19 pandemic and the measures taken by the governmental authorities could disrupt the supply chain and the manufacture or shipment of drug substances and finished drug products for our product candidates for use in our research and clinical trials, delay, limit or prevent our employees and CROs from continuing research and development activities, impede the ability of patients to enroll or continue in clinical trials, or impede testing, monitoring, data collection and analysis or other related activities, any of which could delay our clinical trials and increase our development costs, and have a material adverse effect on our business, financial condition and results of operations.

We could also encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by a Data Safety Monitoring Board for such trial or by the FDA or comparable foreign regulatory authorities. Such authorities may impose such a suspension or termination 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 FDA or comparable foreign regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. In addition, changes in regulatory requirements and policies may occur, and we may need to amend clinical trial protocols

to comply with these changes. Amendments may require us to resubmit our clinical trial protocols to IRBs for reexamination, which may impact the costs, timing or successful completion of a clinical trial.

Further, conducting clinical trials in foreign countries, as we may do for our product candidates, presents additional risks that may delay completion of our clinical trials. These risks include the failure of enrolled patients in foreign countries to adhere to clinical protocol as a result of differences in healthcare services or cultural customs, managing additional administrative burdens associated with foreign regulatory schemes, as well as political and economic risks relevant to such foreign countries.

Additionally, if the results of our clinical trials are inconclusive or if there are safety concerns or serious adverse events associated with our product candidates, we may:

- be delayed in obtaining marketing approval, if at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings
- be subject to additional post-marketing testing requirements;
- be required to perform additional clinical trials to support approval or be subject to additional post-marketing testing requirements;
- have regulatory authorities withdraw, or suspend, their approval of the drug or impose restrictions on its distribution in the form of a modified REMS;
- be subject to the addition of labeling statements, such as warnings or contraindications;
- be sued; or
- experience damage to our reputation.

Our development costs will also increase if we experience delays in testing or obtaining marketing approvals. We do not know whether any of our preclinical studies or clinical trials will begin as planned, need to be restructured or be completed on schedule, if at all. Any delay in, or termination of, our clinical trials will delay the submission of an NDA to the FDA or similar applications with comparable foreign regulatory authorities and, ultimately, our ability to commercialize our product candidates, if approved, and generate product revenue. Even if our clinical trials are completed as planned, we cannot be certain that their results will support our claims for differentiation or the effectiveness or safety of our product candidate. The FDA has substantial discretion in the review and approval process and may disagree that our data support the claims we propose.

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 the FDA or comparable foreign regulatory authorities. The FDA or comparable foreign regulatory authorities 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 FDA or comparable foreign regulatory authorities 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 FDA or comparable foreign regulatory authorities, as the case may be, and may ultimately lead to the denial of marketing approval of one or more of our product candidates.

If we experience delays in the completion of, or termination of, any clinical trial of our product candidates, the commercial prospects of our product candidates will be harmed, and our ability to generate product revenues from any of these product candidates will be delayed. Moreover, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues.

In addition, many of the factors that cause, or lead to, termination or suspension of, or a delay in the commencement or completion of, clinical trials may also ultimately lead to the denial of regulatory approval of a product candidate. Any delays to our clinical trials that occur as a result could shorten any period during which we may have the exclusive right to commercialize our product candidates and our competitors may be

able to bring products to market before we do, and the commercial viability of our product candidates could be significantly reduced. Any of these occurrences may harm our business, financial condition and prospects significantly.

The outcome of preclinical studies and early clinical trials may not be predictive of the success of later clinical trials, and the results of our clinical trials may not satisfy the requirements of the FDA or other comparable foreign regulatory authorities.

Before obtaining regulatory approvals for the commercial sale of any of our product candidates, we will be required to demonstrate with substantial evidence through well-controlled clinical trials that our product candidates are safe and effective for their intended uses. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. Success in preclinical studies and early-stage clinical trials does not mean that future clinical trials will be successful. We do not know whether any of our product candidates will perform in current or future clinical trials as they have performed in preclinical studies. Product candidates in later-stage clinical trials may fail to demonstrate sufficient safety and efficacy to the satisfaction of the FDA or other comparable foreign regulatory authorities despite having progressed through preclinical studies and early-stage clinical trials.

In some instances, there can be significant variability in safety and efficacy results between different clinical trials of the same product candidate due to numerous factors, including changes in trial protocols, differences in size and type of the patient populations, differences in and adherence to the dosing regimen and other trial protocols and the rate of dropout among clinical trial participants. Patients treated with our product candidates may also be undergoing surgical, radiation and chemotherapy treatments and may be using other approved products or investigational new drugs, which can cause side effects or adverse events that are unrelated to our product candidate. As a result, assessments of efficacy can vary widely for a particular patient, and from patient to patient and site to site within a clinical trial. This subjectivity can increase the uncertainty of, and adversely impact, our clinical trial outcomes. We do not know whether any clinical trials we may conduct will demonstrate consistent or adequate efficacy and safety sufficient to obtain marketing approval to market our product candidates. Most product candidates that begin clinical trials are never approved by regulatory authorities for commercialization.

We have limited experience in designing clinical trials and may be unable to design and execute a clinical trial to support marketing approval. We cannot be certain that our planned clinical trials or any other future clinical trials will be successful. Additionally, any safety concerns observed in any one of our clinical trials in our targeted indications could limit the prospects for regulatory approval of our product candidates in those and other indications, which could seriously harm our business.

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 FDA or comparable foreign regulatory authority approval. We cannot guarantee that the FDA or comparable foreign regulatory authorities will interpret trial results as we do, and more trials could be required before we are able to submit applications seeking approval of our product candidates. To the extent that the results of the trials are not satisfactory to the FDA or comparable foreign regulatory authorities for support of a marketing application, we may be required to expend significant resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates. Even if regulatory approval is secured for any of our product candidates, the terms of such approval may limit the scope and use of our product candidate, which may also limit its commercial potential. Furthermore, the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval, which may lead to the FDA or comparable foreign regulatory authorities delaying, limiting or denying approval of our product candidates.

Interim, "top-line" 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 may publicly disclose preliminary or top-line data from our preclinical studies and clinical trials, which is based on a preliminary analysis 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 study or 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 fully and carefully evaluate all data. As a result, the top-line or preliminary results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Top-line and preliminary data also remain subject to audit and verification procedures that may result in the final data being materially different from the top-line or preliminary data we previously published. As a result, top-line and preliminary 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 patient enrollment continues and more patient data become available or as patients from our clinical trials continue other treatments for their disease. Adverse differences between preliminary or interim data and final data could significantly harm our business prospects. Further, disclosure of interim data by us or by our competitors could result in volatility in the trading price of our Class A common stock.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product and our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is material or otherwise appropriate information to include in our disclosure. If the interim, top-line, 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, results of operations, prospects or financial condition. Moreover, such disclosure could adversely affect the trading price of our Class A common stock.

Our current or future product candidates may cause adverse events, toxicities or other undesirable side effects when used alone or in combination with other approved products or investigational new drugs that may result in a safety profile that could inhibit regulatory approval, prevent market acceptance, limit their commercial potential or result in significant negative consequences.

As is the case with pharmaceuticals generally, it is likely that there may be side effects and adverse events associated with the use of our product candidates. Results of our preclinical studies and clinical trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics. Undesirable side effects caused by our product candidates 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 FDA or comparable foreign regulatory authorities. The drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects significantly.

If our product candidates are associated with undesirable side effects or have unexpected characteristics in preclinical studies or clinical trials when used alone or in combination with approved or other investigational products we may need to interrupt, delay or abandon their development or limit development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective. Treatment-related side effects could also affect patient recruitment or the ability of enrolled subjects to complete the trial, or result in potential product liability claims. Any of these occurrences may prevent us from achieving or maintaining market acceptance of the affected product candidate and may harm our business, financial condition and prospects significantly.

Patients in our clinical trials may in the future suffer significant adverse events or other side effects not observed in our preclinical studies or previous clinical trials. Some of our product candidates may be used as chronic therapies or be used in pediatric populations, for which safety concerns may be particularly scrutinized by regulatory agencies. In addition, if our product candidates are used in combination with other therapies, our product candidates may exacerbate adverse events associated with the therapy. Patients treated with our product candidates may also be undergoing surgical, radiation and chemotherapy treatments, which can cause

side effects or adverse events that are unrelated to our product candidate, but may still impact the success of our clinical trials. The inclusion of critically ill patients in our clinical trials may result in deaths or other adverse medical events due to other therapies or medications that such patients may be using or due to the gravity of such patients' illnesses.

If significant adverse events or other side effects are observed in any of our future clinical trials, we may have difficulty recruiting patients to the clinical trials, patients may drop out of our trials, or we may be required to abandon the trials or our development efforts of that product candidate altogether. We, the FDA, other comparable regulatory authorities or an IRB may suspend clinical trials of a product candidate at any time for various reasons, including a belief that subjects 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. Even if the side effects do not preclude the product candidate from obtaining or maintaining marketing approval, undesirable side effects may inhibit market acceptance due to its tolerability versus other therapies. Any of these developments could materially harm our business, financial condition and prospects.

Additionally, if any of our product candidates receives regulatory approval, and we or others later identify undesirable side effects caused by such product, a number of potentially significant negative consequences could result. For example, the FDA could require us to adopt a REMS to ensure that the benefits of treatment with such product candidate outweigh the risks for each potential patient, which may include, among other things, a communication plan to health care practitioners, patient education, extensive patient monitoring or distribution systems and processes that are highly controlled, restrictive and costlier than what is typical for the industry. We or our collaborators may also be required to adopt a REMS or engage in similar actions, such as patient education, certification of health care professionals or specific monitoring, if we or others later identify undesirable side effects caused by any product that we develop alone or with collaborators. Other potentially significant negative consequences include that:

- we may be forced to suspend marketing of that product, or be forced to or decide to remove the product form the marketplace;
- regulatory authorities may withdraw or change their approvals of that product in one or more countries;
- regulatory authorities may require additional warnings on the label or limit access of that product to selective specialized centers with additional safety reporting and with requirements that patients be geographically close to these centers for all or part of their treatment;
- we may be required to create a medication guide outlining the risks of the product for patients, or to conduct post-marketing studies;
- we may be required to change the way the product is administered;
- we could be subject to fines, injunctions, or the imposition of criminal or civil penalties, or to be sued and held liable for harm caused to subjects or patients; and
- the product may become less competitive, and our reputation may suffer.

Any of these events could diminish the usage or otherwise limit the commercial success of our product candidates and prevent us from achieving or maintaining market acceptance of the affected product candidate, if approved by applicable regulatory authorities.

If we experience delays or difficulties in the enrollment and/or maintenance of patients in clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

Patient enrollment is a significant factor in the timing of clinical trials, and the timing of our clinical trials depends, in part, on the speed at which we can recruit patients to participate in our trials, as well as completion of required follow-up periods. We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials to such trial's conclusion as required by the FDA or other comparable foreign regulatory authorities. Additionally, our clinical trials will compete with other clinical trials for product candidates that focusing on the same therapeutic targets (e.g., evaluating patients harboring RAS mutant tumors) as our current and

potential future product candidates, which may further limit enrollment of eligible patients or may result in slower enrollment than we anticipate. The eligibility criteria of our clinical trials, once established, may further limit the pool of available trial participants.

Patient enrollment may also be affected if our competitors have ongoing clinical trials for product candidates that are under development for the same indications as our product candidates, and patients who would otherwise be eligible for our clinical trials instead enroll in clinical trials of our competitors' product candidates. Patient enrollment for any of our clinical trials may be affected by other factors, including:

- size and nature of the patient population;
- severity of the disease under investigation;
- availability and efficacy of approved drugs for the disease under investigation;
- patient eligibility criteria for the trial in question as defined in the protocol;
- perceived risks and benefits of the product candidate under study;
- clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new products that may be approved for the indications we are investigating;
- efforts to facilitate timely enrollment in clinical trials;
- patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment;
- proximity and availability of clinical trial sites for prospective patients;
- continued enrollment of prospective patients by clinical trial sites;
- the risk that patients enrolled in clinical trials will drop out of the trials before completion or, because they may be late-stage cancer patients, will not survive the full terms of the clinical trials; and
- delays or difficulties in enrollment and completion of studies due to the COVID-19 pandemic or any future pandemic.

Our inability to enroll a sufficient number of patients for our clinical trials would result in significant delays or may require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our product candidates and jeopardize our ability to obtain marketing approval for the sale of our product candidates. Furthermore, even if we are able to enroll a sufficient number of patients for our clinical trials, we may have difficulty maintaining enrollment of such patients in our clinical trials.

Even if approved, our product candidates may not achieve adequate market acceptance among physicians, patients, healthcare payors and others in the medical community necessary for commercial success.

Even if our product candidates receive regulatory approval, they may not gain adequate market acceptance among physicians, patients, healthcare payors and others in the medical community. The degree of market acceptance of any of our approved product candidates will depend on a number of factors, including:

- the efficacy and safety profile as demonstrated in clinical trials compared to alternative treatments;
- the timing of market introduction of the product candidate as well as competitive products;
- the clinical indications for which the product candidate is approved;
- restrictions on the use of our product candidates, such as boxed warnings or contraindications in labeling, or a REMS, if any, which may not be required of alternative treatments and competitor products;
- the potential and perceived advantages of product candidates over alternative treatments;
- the cost of treatment in relation to alternative treatments;

- the availability of coverage and adequate reimbursement, as well as pricing, by third-party payors, including government authorities;
- the availability of the approved product candidate for use as a combination therapy;
- relative convenience and ease of administration;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the effectiveness of sales and marketing efforts;
- unfavorable publicity relating to our products or product candidates or similar approved products or product candidates in development by third parties; and
- the approval of other new therapies for the same indications.

If any of our product candidates is approved but does not achieve an adequate level of acceptance by physicians, hospitals, healthcare payors and patients, we may not generate or derive sufficient revenue from that product candidate and our financial results could be negatively impacted.

We may be unable to obtain U.S. or foreign regulatory approvals and, as a result, may be unable to commercialize our product candidates.

Our product candidates are subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, safety, efficacy, approval, recordkeeping, reporting, labeling, storage, packaging, advertising and promotion, pricing, marketing and distribution of drugs. Rigorous preclinical testing and clinical trials and an extensive regulatory approval process must be successfully completed in the United States and in many foreign jurisdictions before a new drug can be marketed. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. We cannot provide any assurance that any product candidate we may develop will progress through required clinical testing and obtain the regulatory approvals necessary for us to begin selling them.

We have not conducted, managed or completed large-scale or pivotal clinical trials nor managed the regulatory approval process with the FDA or any other regulatory authority. The time required to obtain approvals from the FDA and other regulatory authorities is unpredictable, and requires successful completion of extensive clinical trials which typically takes many years, depending upon the type, complexity and novelty of the product candidate. The standards that the FDA and its foreign counterparts use when evaluating clinical trial data can and often changes during drug development, which makes it difficult to predict with any certainty how they will be applied. We may also encounter unexpected delays or increased costs due to new government regulations, including future legislation or administrative action, or changes in FDA policy during the period of drug development, clinical trials and FDA regulatory review.

Any delay or failure in seeking or obtaining required approvals would have a material and adverse effect on our ability to generate revenue from the particular product candidate for which we are developing and seeking approval. Furthermore, any regulatory approval to market a drug may be subject to significant limitations on the approved uses or indications for which we may market the drug or the labeling or other restrictions. In addition, the FDA has the authority to require a REMS as part of approving a NDA, or after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug. These requirements or restrictions might include limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria and requiring treated patients to enroll in a registry. These limitations and restrictions may significantly limit the size of the market for the drug and affect reimbursement by third-party payors.

We are also subject to numerous foreign regulatory requirements governing, among other things, the conduct of clinical trials, manufacturing and marketing authorization, pricing and third-party reimbursement. The foreign regulatory approval process varies among countries, and generally includes all of the risks associated with FDA approval described above as well as risks attributable to the satisfaction of local regulations in foreign jurisdictions. Moreover, the time required to obtain approval may differ from that required to obtain FDA approval.

Our approach to the discovery and development of product candidates is unproven, and we may not be successful in our efforts to use and expand our DCT platform to build a pipeline of product candidates with commercial value.

A key element of our strategy is to use and expand our DCT platform to build a pipeline of product candidates and progress these product candidates through clinical development for the treatment of various cancers. Although our research and development efforts to date have resulted in our discovery and preclinical development of IMM-1-104, it and other product candidates may not be safe or effective for the indications for which we study them in clinical trials, and we may not be able to develop any other product candidates. Our DCT platform is evolving and may not reach a state at which building a pipeline of product candidates is possible.

We have not commenced clinical trials for any product candidates developed with our DCT platform. The scientific research that forms the basis of our efforts to develop product candidates with our platforms is still ongoing. Further, the scientific evidence to support the feasibility of developing therapeutic treatments based on our DCT platform is both preliminary and limited. As a result, we are exposed to a number of unforeseen risks and it is difficult to predict the types of challenges and risks that we may encounter during development of our product candidates. For example, we have not tested any of the product candidates being developed using our DCT platform in humans, and our current data is limited to animal models and preclinical cell lines, the results of which may not translate into humans. As a result, it is possible that safety events or concerns could negatively affect the development of our product candidates, including adversely affecting patient enrollment among the patient populations that we intend to treat.

Given the novelty of our technologies, we intend to work closely with the FDA and comparable foreign regulatory authorities to perform the requisite scientific analyses and evaluation of our methods to obtain regulatory approval for our product candidates; however, due to a lack of comparable experiences, the regulatory pathway with the FDA and comparable regulatory authorities may be more complex and time-consuming relative to other more well-known therapeutics. Even if we obtain human data to support our product candidates, the FDA or comparable foreign regulatory agencies may lack experience in evaluating the safety and efficacy of our product candidates developed using our platforms, which could result in a longer than expected regulatory review process, increase our expected development costs, and delay or prevent commercialization of our product candidates. The validation process takes time and resources, may require independent third-party analyses, and may not be accepted or approved by the FDA and comparable foreign regulatory authorities. We cannot be certain that our approach will lead to the development of approvable or marketable products, alone or in combination with other therapies.

Additionally, a key element of our strategy is to use and expand our platforms to build a pipeline of product candidates and progress those product candidates through clinical development for the treatment of a variety of different types of diseases. Although our research and development efforts to date have been focused on identifying a pipeline of product candidates directed at various disease types, we may not be able to develop product candidates that are safe and effective. Even if we are successful in building our pipeline, the potential product candidates that we identify may not be suitable for clinical development, including as a result of being shown to have harmful side effects or other characteristics that indicate that they are unlikely to be approvable or marketable products that will receive marketing approval and achieve market acceptance. If we do not continue to successfully develop, get approval for and begin to commercialize any product candidates, we will face difficulty in obtaining product revenue in future periods, which could result in significant harm to our financial position and adversely affect our share price.

Even if we are successful in building our pipeline of product candidates, the potential product candidates that we identify may not be suitable for clinical development or generate acceptable clinical data, including as a result of being shown to have unacceptable toxicity or other characteristics that indicate that they are unlikely to be products that will receive marketing approval from the FDA or other regulatory authorities or achieve market acceptance. If we do not successfully develop and commercialize product candidates, we will not be able to generate product revenue in the future, which likely would result in significant harm to our financial position and adversely affect our stock price.

We may develop our current and future product candidates in combination with other therapies, which exposes us to additional risks.

We may also develop certain product candidates as biologic/drug combination products. Additional time may be required to obtain regulatory approval for our product candidates if they are combination products. Our product candidates that may be biologic/drug combination products will require coordination within the FDA and other comparable foreign regulatory authorities for review of their biologic and drug components. Although the FDA and other comparable foreign regulatory authorities have systems in place for the review and approval of combination products, we may experience delays in the development and commercialization of our product candidates that may be combination products due to regulatory timing constraints and uncertainties in the product development and approval process.

In addition, even if any product candidate we develop were to receive marketing approval or be commercialized for use in combination with other existing therapies, we would continue to be subject to the risks that the FDA or comparable foreign regulatory authorities outside of the United States could revoke approval of the therapy used in combination with our product or that safety, efficacy, manufacturing or supply issues could arise with any of those existing therapies. If the therapies we use in combination with our product candidates are replaced as the standard of care for the indications we choose for any of our product candidates, the FDA or comparable foreign regulatory authorities may require us to conduct additional clinical trials. The occurrence of any of these risks could result in our own products, if approved, being removed from the market or being less successful commercially.

We also may choose to evaluate our current product candidates or any other future product candidates in combination with one or more cancer therapies that have not yet been approved for marketing by the FDA or comparable foreign regulatory authorities. We will not be able to market and sell our product candidates we develop in combination with an unapproved cancer therapy for a combination indication if that unapproved therapy does not ultimately obtain marketing approval either alone or in combination with our product. In addition, unapproved cancer therapies face the same risks described with respect to our product candidates currently in development and clinical trials, including the potential for serious adverse effects, delay in their clinical trials and lack of FDA approval.

If the FDA or comparable foreign regulatory authorities do not approve these other drugs or revoke their approval of, or if safety, efficacy, quality, manufacturing or supply issues arise with, the drugs we choose to evaluate in combination with our product candidate we develop, we may be unable to obtain approval of or market such combination therapy.

If we successfully develop our product candidates, we may seek approval from the FDA through the use of accelerated approval pathways. If we are unable to obtain such approval, we may be required to conduct additional preclinical studies or clinical trials beyond those that we initially 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, if our confirmatory trials do not verify clinical benefit, or if we do not comply with rigorous post-marketing requirements, the FDA may seek to withdraw accelerated approval.

We may in the future seek an accelerated approval for one or more of our product candidates. Under the accelerated approval program, 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. If such post-approval studies fail to confirm the drug's clinical benefit, the FDA may withdraw its approval of the drug.

Prior to seeking accelerated approval for any of our product candidates, we intend to seek feedback from the FDA and will otherwise evaluate our ability to seek and receive accelerated approval. There can be no assurance that after our evaluation of the feedback and other factors we will decide to pursue or submit an NDA for accelerated approval or any other form of expedited development, review or approval. Similarly, there can be no assurance that after subsequent FDA feedback 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 submit an application for accelerated approval or receive an expedited regulatory designation (e.g., breakthrough therapy designation) for our product candidates, there can be no assurance that such submission or application will be accepted or that any expedited development, review or approval will be granted on a timely basis, or at all. The FDA or other comparable foreign regulatory authorities could also require us to conduct further studies prior to considering our application or granting approval of any type. 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 time 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.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we focus on research programs, therapeutic platforms and product candidates that we identify for specific indications. As a result, we may forego or delay pursuit of opportunities with other therapeutic platforms or product candidates or for other indications that later prove to have greater commercial potential or a greater likelihood of success than our product candidates. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs, therapeutic platforms and product candidates for specific indications may not yield any commercially viable products.

Risks Related to Our Business

We are early in our development efforts. Our business is substantially dependent on the successful development of our current and future product candidates. If we are unable to advance our current or future product candidates through clinical trials, obtain marketing approval to treat the indications we seek to treat with our product candidates, and ultimately commercialize any product candidates we develop, or experience significant delays in doing so, our business will be materially harmed.

We are early in our development efforts and we have not yet completed our IND-enabling studies for our lead product candidate, IMM-1-104. Our other product candidates are in earlier stages of drug development. We have invested substantially all of our efforts and financial resources in the identification of targets and preclinical development of small molecules targeting the MAPK and mTOR pathways in cancer therapy and small molecules targeting central nervous system disorders, including AD.

The success of our business, including our ability to finance our company and generate revenue from products in the future, which we do not expect will occur for several years, if ever, will depend heavily on the successful development and eventual commercialization of the product candidates we develop, which may never occur. Our current product candidates, and any future product candidates we develop, will require additional preclinical and clinical development, management of clinical, preclinical and manufacturing activities, marketing approval in the United States and other markets, demonstrating effectiveness to pricing and reimbursement authorities, obtaining sufficient manufacturing supply for both clinical development and commercial production, building of a commercial organization, and substantial investment and significant marketing efforts before we generate any revenues from product sales.

The success of our current and future product candidates will depend on several factors, including the following:

- the successful and timely completion of additional preclinical studies;
- the successful initiation, patient enrollment and completion of our anticipated clinical trials on a timely basis, including any delays arising out of the COVID-19 pandemic or any future pandemic;
- maintaining and establishing relationships with CROs and clinical sites for clinical development, both in the United States and internationally;
- the frequency and severity of adverse events in the clinical trials;
- the efficacy, safety and tolerability profiles that are satisfactory to the FDA or any comparable foreign regulatory authority for marketing approval;
- the timely receipt of marketing approvals from applicable regulatory authorities;
- the extent of any required post-marketing approval commitments to applicable regulatory authorities;
- the maintenance of existing or the establishment of new supply arrangements with third-party drug product suppliers and manufacturers for clinical development;
- the maintenance of existing, or the establishment of new, scaled production arrangements with third-party manufacturers to obtain finished products that are appropriate for commercial sale of our product candidates, if approved;
- obtaining and maintaining patent protection, trade secret protection and regulatory exclusivity, both in the United States and internationally;
- the protection of our rights in our intellectual property portfolio;
- the successful launch of commercial sales following any marketing approval;
- a continued acceptable safety profile following any marketing approval;
- commercial acceptance by patients, the medical community and third-party payors; and
- our ability to compete with other therapies.

We do not have complete control over many of these factors, including certain aspects of clinical development and the regulatory submission process, potential threats to our intellectual property rights and the manufacturing, marketing, distribution and sales efforts of any future collaborator. If we are not successful with respect to one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize the product candidates we develop, which would materially harm our business. If we do not receive marketing approvals for IMM-1-104, or any other product candidate we develop, we may not be able to continue our operations.

We are substantially dependent on our platform, including our proprietary technologies such as DCT and Fluency, which are supported by our information technology systems. Any failure of these or other elements of our platform will materially harm our business.

We are substantially dependent on our platform, including our proprietary technologies such as DCT and Fluency, which are supported by our information technology systems, for significant elements of our drug discovery process, bioinformatics and computational biology software systems, database of information relating to our product candidates and their role in the targeted disease process, amongst others. Although we invest substantially in the backup/restore, high-availability architecture, monitoring and reporting, documentation and preventive security controls of our systems and proprietary technologies, these elements of our platform are still vulnerable to damage from a variety of sources, including telecommunications or network failures, malicious or inadvertent human acts, and natural disasters. Our information technology systems and proprietary technologies are potentially also vulnerable to physical or electronic break-ins, employee errors, computer viruses and similar disruptive problems. Despite the precautionary measures we have taken to prevent unanticipated problems that could affect our information technology systems and proprietary technologies, failures or significant downtime of these systems could prevent us from conducting

research and development activities for our current and future product candidates, and ultimately delay our drug discovery process. Any failure of our information technology systems and proprietary technologies will materially harm our business.

Our long-term prospects depend in part upon discovering, developing and commercializing product candidates, which may fail in development or suffer delays that adversely affect their commercial viability.

Our future results of operations are dependent on our ability to successfully discover, develop, obtain regulatory approval for and commercialize product candidates beyond those we currently have in preclinical studies and early stage development. A product candidate can unexpectedly fail at any stage of preclinical and clinical development. The historical failure rate for product candidates is high due to risks relating to safety, efficacy, clinical execution, changing standards of medical care and other unpredictable variables. The results from preclinical studies or early clinical trials of a product candidate may not be predictive of the results that will be obtained in later stage clinical trials of the product candidate.

The success of the product candidates we have or may develop will depend on many factors, including the following:

- the success of our research methodology in identifying potential indications or product candidates;
- generating sufficient data to support the initiation or continuation of clinical trials;
- obtaining regulatory permission to initiate clinical trials;
- contracting with the necessary parties to conduct clinical trials;
- successful enrollment of patients in, and the completion of, clinical trials on a timely basis;
- the timely manufacture of sufficient quantities of the product candidate for use in clinical trials;
- adverse events in the clinical trials; and
- any potential interruptions or delays resulting from factors related to the COVID-19 pandemic or any future pandemic.

Even if we successfully advance any other product candidates into clinical development, their success will be subject to all of the clinical, regulatory and commercial risks described elsewhere in this “Risk Factors” section. Accordingly, we cannot assure you that we will ever be able to discover, develop, obtain regulatory approval of, commercialize or generate significant revenue from our other product candidates.

We have never commercialized a product candidate before and may lack the necessary expertise, personnel and resources to successfully commercialize any products on our own or together with suitable collaborators.

We have never commercialized a product candidate, and we currently have no sales force, marketing or distribution capabilities. We will have to develop our own sales, marketing and supply organization or outsource these activities to a third party to commercialize our products. If we decide to license our product candidate to others, we may need to rely on the marketing assistance and guidance of those collaborators.

Factors that may affect our ability to commercialize our product candidates on our own include recruiting and retaining adequate numbers of effective sales and marketing personnel, obtaining access to or persuading adequate numbers of physicians to prescribe our product candidates and other unforeseen costs associated with creating an independent sales and marketing organization. Developing a sales and marketing organization will be expensive and time-consuming and could delay the launch of our product candidates. We may not be able to build an effective sales and marketing organization. If we are unable to build our own distribution and marketing capabilities or to find suitable partners for the commercialization of our product candidates, we may not generate revenues from them or be able to reach or sustain profitability.

We face significant competition, and if our competitors develop and market technologies or products more rapidly than we do or that are more effective, safer or less expensive than the product candidates we develop, our commercial opportunities will be negatively impacted.

The pharmaceutical and biotechnology industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary and novel products and product candidates. Our

competitors have developed, are developing or may develop products, product candidates and processes competitive with our product candidates. Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. We believe that a significant number of products are currently under development, and may become commercially available in the future, for the treatment of conditions for which we may attempt to develop product candidates. In addition, our products may need to compete with off-label drugs used by physicians to treat the indications for which we seek approval. This may make it difficult for us to replace existing therapies with our products.

In particular, there is intense competition in the fields of oncology we are pursuing. We have competitors both in the United States and internationally, including major multinational biopharmaceutical companies, established biotechnology companies, specialty biopharmaceutical companies, emerging and start-up companies, universities and other research institutions. For example, our product candidates and programs for oncology and neuroscience will compete with products or programs being advanced by certain pharmaceutical and biotechnology companies. We also compete with these organizations to recruit management, scientists and clinical development personnel, which 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, enrolling subjects for clinical trials and in identifying and in-licensing new product candidates.

We have chosen to initially address well-validated biochemical targets, and therefore expect to face competition from existing products and products in development for each of our product candidates. There are a large number of companies developing or marketing treatments for cancer, including many major pharmaceutical and biotechnology companies. Many of these current and potential competitors have significantly greater financial, manufacturing, marketing, drug development, technical and human resources and commercial expertise than we do. Large pharmaceutical and biotechnology companies, in particular, have extensive experience in clinical testing, obtaining regulatory approvals, recruiting patients and manufacturing biotechnology products. These companies also have significantly greater research and marketing capabilities and experience than we do and may also have 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. Established pharmaceutical and biotechnology companies may also invest heavily to accelerate discovery and development of novel compounds or to in-license novel compounds that could make the product candidates that we develop obsolete. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies, as well as in acquiring technologies complementary to, or necessary for, our programs. As a result of all of these factors, our competitors may succeed in obtaining approval from the FDA or other comparable foreign regulatory authorities or in discovering, developing and commercializing products in our field before we do.

Our commercial opportunities could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe effects, are more convenient, have a broader label, are marketed more effectively, are reimbursed or are less expensive than any products that we may develop. Our competitors also may obtain marketing approval from the FDA or other comparable foreign regulatory authorities for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. Even if the product candidates we develop achieve marketing approval, they may be priced at a significant premium over competitive products if any have been approved by then, resulting in reduced competitiveness. Technological advances or products developed by our competitors may render our technologies or product candidates obsolete, less competitive or not economical. If we are unable to compete effectively, our opportunity to generate revenue from the sale of our products we may develop, if approved, could be adversely affected.

If the market opportunity for any product candidate that we develop is smaller than we believe, our revenue may be adversely affected and our business may suffer.

We intend to initially focus our product candidate development on treatments for various oncology indications. Our projections of addressable patient populations that may benefit from treatment with our product candidates are based on our 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 cancers. Additionally, the potentially addressable patient population for our product candidates may not ultimately be amenable to treatment with our product candidates. Our market opportunity may also be limited by future competitor treatments that enter the market. If any of our estimates prove to be inaccurate, the market opportunity for any product candidate that we develop could be significantly diminished and have an adverse material impact on our business.

We have never obtained marketing approval for a product candidate and we may be unable to obtain, or may be delayed in obtaining, marketing approval for any product candidate.

We have never obtained marketing approval for a product candidate. It is possible that the FDA may refuse to accept for substantive review any NDAs that we submit for our product candidates or may conclude after review of our data that our applications are insufficient to obtain marketing approval of our product candidates. We believe our approach of treating conditions or diseases through neuroregeneration is novel and, as a result, the process for, and the outcome of, FDA approval is especially uncertain. If the FDA does not accept or approve our NDAs for our product candidates, it may require that we conduct additional clinical, preclinical, or manufacturing validation studies and submit that data before it will reconsider our applications. Depending on the extent of these or any other FDA-required studies, approval of any NDA that we submit may be delayed or may require us to expend more resources than we have available. It is also possible that additional studies, if performed and completed, may not be considered sufficient by the FDA to approve our NDAs.

Any delay in obtaining, or an inability to obtain, marketing approvals would prevent us from commercializing our product candidates, generating revenues, and achieving and sustaining profitability. If any of these outcomes occur, we may be forced to abandon our development efforts for our product candidates, which could significantly harm our business.

The COVID-19 pandemic and potential future pandemics could continue to adversely impact our business, including our anticipated clinical trials, supply chain and business development activities.

In December 2019, SARS-CoV-2, a novel strain of coronavirus, was first reported in Wuhan, China and has since become a global pandemic. The President of the United States declared the COVID-19 pandemic a national emergency and many states and municipalities in the United States have announced aggressive actions to reduce the spread of the disease, including limiting non-essential gatherings of people, ceasing all non-essential travel, ordering certain businesses and government agencies to cease non-essential operations at physical locations and issuing “shelter-in-place” orders which direct individuals to shelter at their places of residence (subject to limited exceptions). We may experience limitations on employee resources in the future, including because of sickness of employees or their families. The effects of government actions and our own policies and those of third parties to reduce the spread of COVID-19 may negatively impact productivity and slow down or delay our future clinical trials, preclinical studies and research and development activities, and may cause disruptions to our supply chain and impair our ability to execute our business development strategy. In the event that government authorities were to enhance current restrictions, our employees who currently are not telecommuting may no longer be able to access our facilities, and our operations may be further limited or curtailed.

As COVID-19 continues to spread, we may experience ongoing disruptions that could severely impact our business, preclinical studies and clinical trials, including:

- interruption or delays in our operations, which may impact our ability to conduct and produce preclinical results required for submission of an IND;
- delays in receiving approval from local regulatory authorities to initiate our planned clinical trials;
- delays or difficulties in enrolling patients in our clinical trials;
- delays or difficulties in clinical site initiation, including difficulties in recruiting clinical site investigators and clinical site staff;
- delays in clinical sites receiving the supplies and materials needed to conduct our clinical trials, including interruption in global shipping that may affect the transport of clinical trial materials;

- changes in local regulations as part of a response to the COVID-19 outbreak which may require us to change the ways in which our clinical trials are conducted, which may result in unexpected costs, or to discontinue the clinical trials altogether;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our clinical trials;
- interruption of key clinical trial activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers and others, or interruption of clinical trial subject visits and study procedures, the occurrence of which could affect the integrity of clinical trial data;
- interruption or delays in the operations of the FDA or other regulatory authorities, which may impact review and approval timelines;
- risk that participants enrolled in our clinical trials will acquire COVID-19 while the clinical trial is ongoing, which could impact the results of the clinical trial, including by increasing the number of observed adverse events; and
- refusal of the FDA to accept data from clinical trials in affected geographies.

These and other disruptions in our operations and the global economy could negatively impact our business, results of operations and financial condition.

Our future clinical trials may be affected by the COVID-19 pandemic or any future pandemic. For example, some clinical trial sites have slowed down or stopped further enrollment of new patients in clinical trials, denied access to site monitors and otherwise curtailed certain operations. Similarly, our ability to recruit and retain principal investigators and site staff who, as healthcare providers, may have heightened exposure to COVID-19, may be adversely impacted. Our planned clinical trials may also be impacted by interruptions or delays in the operations of the FDA and comparable foreign regulatory agencies. We and our CROs will act in accordance with the guidance issued by the FDA in our future clinical trials to ensure the monitoring and safety of patients and minimize risks to trial integrity during the COVID-19 pandemic. This may have unforeseen effects on the enrollment, progress and completion of these trials and the findings. These events could delay our clinical trials, increase the cost of completing our clinical trials and negatively impact the integrity, reliability or robustness of the data from our clinical trials.

In addition, quarantines, shelter-in-place and similar government orders, or the perception that such orders, shutdowns or other restrictions on the conduct of business operations could occur, related to COVID-19 or other infectious diseases could impact personnel at third-party manufacturing facilities upon which we may rely in the future, or the availability or cost of materials, which could disrupt the supply chain for our product candidates. To the extent our future suppliers and service providers are unable to comply with their obligations under our future agreements with them or they are otherwise unable to deliver or are delayed in delivering goods and services to us due to the COVID-19 pandemic, our future ability to continue meeting clinical supply demand for our product candidates or otherwise advancing development of our product candidates may become impaired.

The spread of COVID-19 and actions taken to reduce its spread may also materially affect us economically. While the potential economic impact brought by, and the duration of, the COVID-19 pandemic may be difficult to assess or predict, there could be a significant disruption of global financial markets, reducing our ability to access capital, which could in the future negatively affect our liquidity and financial position. In addition, the trading prices for other biopharmaceutical companies have been highly volatile as a result of the COVID-19 pandemic. As a result, we may face difficulties raising capital through sales of our Class A common stock or such sales may be on unfavorable terms.

COVID-19 and actions taken to reduce its spread continue to rapidly evolve. The extent to which COVID-19 may impede the development of our product candidates, reduce the productivity of our employees, disrupt our supply chains, delay our clinical trials, reduce our access to capital or limit our business development activities, will depend on future developments, which are highly uncertain and cannot be predicted with confidence. To the extent the COVID-19 pandemic adversely affects our business and financial results, it may

also have the effect of heightening many of the other risks described in this "Risk Factors" section, such as those relating to the timing and results of our clinical trials and our financing needs.

We may fail to adequately meet the requirements under our computational biology service contracts to pharmaceutical and biotechnology companies, which may harm our reputation, growth opportunities and prospects, possibly resulting in related losses.

Over a decade ago, we began to offer computational biology services to pharmaceutical and biotechnology companies. We have deprioritized this business and plan to gradually wind down our computational biology services to pharmaceutical and biotechnology companies in the future. However, we are currently servicing several companies and in doing so, we must:

- accurately assess and meet the customer's needs;
- ensure our computational biology services meet industry standards and practices for performance of similar services;
- retain the proper personnel to fulfill these service contracts; and
- compete effectively with other computational biology service providers performing similar services.

If we fail to adequately meet the requirements under our computational biology service contracts to our typical high standards, our reputation, growth opportunities and prospects could be adversely affected, possibly resulting in related losses. In addition, as is typical for contracts of this nature, there are inherent legal risks and potential liabilities associated with our work under each of our past, present and future contracts.

Risks Relating to Our Dependence on Third Parties

We substantially rely, and expect to continue to rely, on third parties, including independent clinical investigators and CROs, to conduct certain aspects of our preclinical studies, and in the future, our clinical trials. If these third parties do not successfully carry out their contractual duties, comply with applicable regulatory requirements or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.

We substantially rely, and expect to continue to rely, on third parties, including independent clinical investigators and third-party CROs, to conduct certain aspects of our preclinical studies and to monitor and manage data for our ongoing preclinical programs. We rely on these parties for execution of our preclinical studies and clinical trials, and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies and trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on these third parties does not relieve us of our regulatory responsibilities. We, our third-party contractors and CROs are required to comply with GCP requirements, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for all of our products candidates in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of these third parties or our CROs fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials comply with GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be adversely affected if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Further, there is no guarantee that any such CROs, investigators or other third parties on which we rely will devote adequate time and resources to our development activities or perform as contractually required. These risks are heightened as a result of the efforts of government agencies and the CROs themselves to limit the spread of COVID-19, including quarantines and shelter-in-place orders. These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting

clinical trials or other product development activities, which could affect their performance on our behalf. If independent investigators or CROs fail to devote sufficient resources to the development of our product candidates, or if CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. As a result, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed or precluded entirely.

Our CROs have the right to terminate their agreements with us in the event of an uncured material breach. In addition, some of our CROs have an ability to terminate their respective agreements with us if it can be reasonably demonstrated that the safety of the subjects participating in our clinical trials warrants such termination, if we make a general assignment for the benefit of our creditors or if we are liquidated.

If any of our relationships with these third-party CROs terminate, we may not be able to enter into arrangements with alternative CROs or to do so on commercially reasonable terms. Switching or adding additional CROs involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Additionally, CROs may lack the capacity to absorb higher workloads or take on additional capacity to support our needs. Though we carefully manage our relationships with our CROs, there can be no assurance that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects.

We rely on, and in the future may rely on, third-party datasets and collaborations with third parties to inform patient selection, drug target identification and other bioinformatic and computational biology analyses for our existing product candidates and any future product candidates and for the supply of biomarker companion diagnostics.

We are using bioinformatics, including data analytics, biostatistics and computational biology, throughout our drug discovery and development process, including to identify new target and biomarker opportunities. As part of this approach, we interrogate public and proprietary datasets, including, but not limited to, human tumor genetic information and specific cancer-target dependency networks. We rely on these datasets and data analytics for multiple analyses, including identifying or validating some of our biomarker-target relationships and access to these databases may not continue to be available publicly or through a proprietary subscription on acceptable terms. Our past, present and future use of such datasets could also create potential liabilities for us if the data provided to us contains inherent errors, inaccuracies or artifacts, or if we improperly analyze, handle, store or utilize the data.

Many of our product candidates also rely on the availability and use of commercially available tumor diagnostics panels or data on the prevalence of our target patient population to inform the patient selection and drug target identification for our product candidates. In cases where such biomarker diagnostic is not already commercially available, we expect to establish strategic collaborations for the clinical supply and development of companion diagnostics. If these diagnostics are not able to be developed, or if commercial tumor profiling panels are not able to be updated to include additional tumor-associated genes, or if clinical oncologists do not incorporate molecular or genetic sequencing into their clinical practice, we may not be successful in developing our existing product candidates or any future product candidates.

If we decide to establish new collaborations in the future, but are not able to establish those collaborations on commercially reasonable terms, we may have to alter our development and commercialization plans.

Our drug development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. We may seek to selectively form collaborations to expand our capabilities, potentially accelerate research and development activities and provide for commercialization activities by third parties. Any of these relationships may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute our existing stockholders, or disrupt our management and business.

We may face significant competition in seeking appropriate collaborators and the related negotiation process is time-consuming and complex. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or comparable foreign regulatory authorities, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing drugs, the existence of uncertainty with respect to our ownership of intellectual property and industry and market conditions generally. The potential collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such collaboration could be more attractive than the one with us for our product candidate. Further, we may not be successful in our efforts to establish a collaboration or other alternative arrangements for future product candidates because they may be deemed to be at too early of a stage of development for collaborative effort and third parties may not view them as having the requisite potential to demonstrate safety and efficacy.

In addition, there have been a significant number of recent business combinations among large biopharmaceutical companies that have resulted in a reduced number of potential future collaborators. Even if we are successful in entering into a collaboration, the terms and conditions of that collaboration may restrict us from entering into future agreements on certain terms with potential collaborators.

If and when we seek to enter into collaborations, we may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of a product candidate, 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 acceptable 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.

We may enter into collaborations in the future with third parties for the development and commercialization of product candidates. If those collaborations are not successful, we may not be able to capitalize on the market potential of these product candidates.

We may seek third-party collaborators in the future for the development and commercialization of one or more of our product candidates. Our likely collaborators for any future collaboration arrangements include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies.

We will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our product candidates. Our ability to generate revenues from these arrangements will depend on our collaborators' abilities and efforts to successfully perform the functions assigned to them in these arrangements. Collaborations involving our product candidates could pose numerous risks to us, including the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations and may not perform their obligations as expected;
- collaborators may deemphasize or not pursue development and commercialization of our product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus, including as a result of a sale or disposition of a business unit or development function, or available funding or external factors such as an acquisition that diverts resources or creates competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the 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;

- a collaborator with marketing and distribution rights to multiple products may not commit sufficient resources to the marketing and distribution of our product relative to other products;
- collaborators may not properly obtain, maintain, defend or enforce our intellectual property rights or may use our proprietary information and intellectual property in such a way as to invite litigation or other intellectual property related proceedings that could jeopardize or invalidate our proprietary information and intellectual property or expose us to potential litigation or other intellectual property related proceedings;
- disputes may arise between the collaborators and us that result in the delay or termination of the research, development or commercialization of our product candidates or that result in costly litigation or arbitration that diverts management attention and resources;
- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates;
- collaboration agreements may not lead to development or commercialization of product candidates in the most efficient manner or at all; and
- if a collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our drug development or commercialization program could be delayed, diminished or terminated.

Our employees, independent contractors, consultants, commercial collaborators, principal investigators, CROs, suppliers and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk that our employees, independent contractors, consultants, commercial collaborators, principal investigators, CROs, suppliers and vendors may engage in misconduct or other improper activities. Misconduct by these parties could include failures to comply with FDA regulations, provide accurate information to the FDA, comply with federal and state health care fraud and abuse and compliance laws and regulations, accurately report financial information or data or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the health care industry are subject to extensive laws and regulations intended to prevent fraud, submission of false claims, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting/rebating, marketing and promotion, consulting, sales commission, customer incentive programs and other business arrangements. Misconduct by these parties could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter misconduct by these parties, 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 governmental 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, including the imposition of significant penalties, including civil, criminal and administrative penalties, damages, fines, disgorgement, individual imprisonment, exclusion from participation in government funded healthcare programs, such as Medicare and Medicaid, integrity oversight and reporting obligations, contractual damages, reputational harm, diminished profits and future earnings and the curtailment or restructuring of our operations.

Risks Related to Manufacturing

The manufacture of drugs is complex and our third-party manufacturers may encounter difficulties in production. If any of our third-party manufacturers encounter such difficulties, our ability to provide adequate supply of our product candidates for clinical trials or our products for patients, if approved, could be delayed or prevented.

Manufacturing drugs, especially in large quantities, is complex and may require the use of innovative technologies. Each lot of an approved drug product must undergo thorough testing for identity, strength,

quality, purity and potency. Manufacturing drugs requires facilities specifically designed for and validated for this purpose, and sophisticated quality assurance and quality control procedures are necessary. Slight deviations anywhere in the manufacturing process, including filling, labeling, packaging, storage and shipping and quality control and testing, may result in lot failures, product recalls or spoilage. When changes are made to the manufacturing process, we may be required to provide preclinical and clinical data showing the comparable identity, strength, quality, purity or potency of the products before and after such changes. If microbial, viral or other contaminations are discovered at the facilities of our manufacturer, such facilities may need to be closed for an extended period of time to investigate and remedy the contamination, which could delay clinical trials and adversely harm our business. The use of biologically derived ingredients can also lead to allegations of harm, including infections or allergic reactions, or closure of product facilities due to possible contamination. If our manufacturers are unable to produce sufficient quantities for clinical trials or for commercialization as a result of these challenges, or otherwise, our development and commercialization efforts would be impaired, which would have an adverse effect on our business, financial condition, results of operations and growth prospects.

We contract with third parties for the manufacture of our product candidates for preclinical studies, and expect to continue to do so for clinical trials and ultimately, for commercialization of any approved product candidate. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or drugs or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We do not currently have the infrastructure or internal capability to manufacture supplies of our product candidates for use in development and commercialization. We rely, and expect to continue to rely, on third-party manufacturers for the production of our product candidates for preclinical studies and clinical trials under the guidance of members of our organization. We do not have long-term supply agreements. Furthermore, the raw materials for our product candidates may be sourced, in some cases, from a single-source supplier. If we were to experience an unexpected loss of supply of any of our product candidates or any of our future product candidates for any reason, whether as a result of manufacturing, supply or storage issues or otherwise, we could experience delays, disruptions, suspensions or terminations of, or be required to restart or repeat, any pending or ongoing clinical trials.

We expect to continue to rely on third-party manufacturers for the commercial supply of any of our product candidates for which we obtain marketing approval. We may be unable to maintain or establish required agreements with third-party manufacturers or to do so on acceptable terms. Even if we are able to establish agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, including:

- the failure of the third party to manufacture our product candidates according to our schedule, or at all, including if our third-party contractors give greater priority to the supply of other products over our product candidates or otherwise do not satisfactorily perform according to the terms of the agreements between us and them;
- the reduction or termination of production or deliveries by suppliers, or the raising of prices or renegotiation of terms;
- the termination or nonrenewal of arrangements or agreements by our third-party contractors at a time that is costly or inconvenient for us;
- the breach by the third-party contractors of our agreements with them;
- the failure of third-party contractors to comply with applicable regulatory requirements;
- the failure of the third party to manufacture our product candidates according to our specifications;
- the mislabeling of clinical supplies, potentially resulting in the wrong dose amounts being supplied or active drug or placebo not being properly identified;
- clinical supplies not being delivered to clinical sites on time, leading to clinical trial interruptions, or of drug supplies not being distributed to commercial vendors in a timely manner, resulting in lost sales; and

- the misappropriation of our proprietary information, including our trade secrets and know-how.

We do not have complete control over all aspects of the manufacturing process of, and are dependent on, our contract manufacturing partners for compliance with cGMP regulations for manufacturing both active drug substances and finished drug products. Third-party manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside of the United States. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and/or maintain marketing approval for their manufacturing facilities. In addition, we do not have control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain marketing approval for or market our product candidates, if approved. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or drugs, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our product candidates or drugs and harm our business and results of operations.

In the event that any of our manufacturers fails to comply with such requirements or to perform its obligations to us in relation to quality, timing or otherwise, or if our supply of components or other materials becomes limited or interrupted for other reasons, including due to the impact of the COVID-19 pandemic, we may be forced to manufacture the materials ourselves, for which we currently do not have the capabilities or resources, or enter into an agreement with another third-party, which we may not be able to do on commercially reasonable terms, if at all. In particular, any replacement of our manufacturers could require significant effort and expertise because there may be a limited number of qualified replacements. In some cases, the technical skills or technology required to manufacture our product candidates may be unique or proprietary to the original manufacturer and we may have difficulty transferring such skills or technology to another third-party and a feasible alternative may not exist. In addition, certain of our product candidates and our own proprietary methods have never been produced or implemented outside of our company, and we may therefore experience delays to our development programs if and when we attempt to establish new third-party manufacturing arrangements for these product candidates or methods. These factors would increase our reliance on such manufacturer or require us to obtain a license from such manufacturer in order to have another third-party manufacture our product candidates. If we are required to or voluntarily change manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines and that the product produced is equivalent to that produced in a prior facility. The delays associated with the verification of a new manufacturer and equivalent product could negatively affect our ability to develop product candidates in a timely manner or within budget.

Our or a third-party's failure to execute on our manufacturing requirements, do so on commercially reasonable terms and timelines and comply with cGMP requirements could adversely affect our business in a number of ways, including:

- inability to meet our product specifications and quality requirements consistently;
- inability to initiate or continue clinical trials of our product candidates under development;
- delays in submitting regulatory applications, or receiving marketing approvals, for our product candidates, if at all;
- inability to commercialize any product candidates that receive marketing approval on a timely basis;
- loss of the cooperation of future collaborators;
- subjecting third-party manufacturing facilities or our manufacturing facilities to additional inspections by regulatory authorities;
- requirements to cease development or to recall batches of our product candidates;

- in the event of approval to market and commercialize our product candidates, an inability to meet commercial demands for our product or any other future product candidates; and
- our future profit margins.

Changes in methods of product candidate manufacturing or formulation may result in additional costs or delay.

As product candidates progress through preclinical and clinical trials to marketing approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize yield and manufacturing batch size, minimize costs and achieve consistent quality and results. Such changes carry the risk that they will not achieve these intended objectives. Any of these changes could cause our product candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the altered materials. This could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidates and jeopardize our ability to commercialize our product candidates, if approved, and generate revenue.

Risks Related to Legal and Regulatory Compliance Matters

Our relationships with healthcare professionals, clinical investigators, CROs and third party payors in connection with our current and future business activities may be subject to federal and state healthcare fraud and abuse laws, false claims laws, transparency laws, government price reporting, and health information privacy and security laws, which could expose us to, among other things, criminal sanctions, civil penalties, contractual damages, exclusion from governmental healthcare programs, reputational harm, administrative burdens and diminished profits and future earnings.

Healthcare providers and third-party payors play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our current and future arrangements with healthcare professionals, clinical investigators, CROs, third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute our products for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations include, among others, the following:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a federal healthcare program such as Medicare and Medicaid. The term "remuneration" has been broadly interpreted to include anything of value. A person or entity does not need to have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it in order to have committed a violation;
- the federal false claims laws, including the civil False Claims Act, which can be enforced by private citizens through civil whistleblower or qui tam actions, and civil monetary penalties laws, prohibit individuals or entities from, among other things, knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government, with potential liability including mandatory treble damages and significant per claim penalties per false claim or statement. In addition, the government may assert that a claim including items or services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;
- the federal Criminal Statute on False Statements Relating to Healthcare Matters, which makes it a crime to knowingly and willfully falsify, conceal, or cover up a material fact, make any materially false, fictitious, or fraudulent statements or representations, or make or use any materially false writing or document knowing the same to contain any materially false, fictitious, or fraudulent statement or entry in connection with the delivery of or payment for healthcare benefits, items, or services;

- the federal Civil Monetary Penalties Law, which authorizes the imposition of substantial civil monetary penalties against an entity, such as a pharmaceutical manufacturer, that engages in activities including, among others (1) knowingly presenting, or causing to be presented, a claim for services not provided as claimed or that is otherwise false or fraudulent in any way; (2) arranging for or contracting with an individual or entity that is excluded from participation in federal healthcare programs to provide items or services reimbursable by a federal healthcare program; (3) violations of the federal Anti-Kickback Statute; or (4) failing to report and return a known overpayment;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, prohibits, among other things, executing or attempting to execute a scheme to defraud any healthcare benefit program or making false statements 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;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their implementing regulations, also imposes obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;
- the federal Physician Payments Sunshine Act requires applicable manufacturers of covered drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to annually report to the Centers for Medicare and Medicaid Services, or CMS, information regarding payments and other transfers of value to physicians (as defined by statute), certain other healthcare providers starting in 2022 and teaching hospitals, as well as information regarding ownership and investment interests held by physicians and their immediate family members. The information reported is publicly available on a searchable website, with disclosure required annually;
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; some state laws require biotechnology companies to comply with the biotechnology industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and
- some state laws require biotechnology companies to report information to state agencies and/or commercial purchasers on the pricing of certain drug products that exceed a certain level as identified in the relevant statute. Some of these laws and regulations contain ambiguous requirements that government officials have not yet clarified. Given the lack of clarity in the laws and their implementation, our reporting actions could be subject to the penalty provisions of the pertinent federal and state laws and regulations.

State and foreign laws also govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts. For instance, the collection and use of health data in the European Union is governed by the General Data Protection Regulation, or the GDPR, which extends the geographical scope of European Union data protection law to non-European Union entities under certain conditions, tightens existing European Union data protection principles, creates new obligations for companies and new rights for individuals. Failure to comply with the GDPR may result in substantial fines and other administrative penalties. The GDPR may increase our responsibility and liability in relation to personal data that we process and we may be required to put in place additional mechanisms ensuring compliance with the GDPR. This may be onerous, and if our efforts to comply with GDPR or other applicable European Union laws and regulations are not successful, it could adversely affect our business in the European Union. Moreover, the United Kingdom leaving the EU could also lead to further legislative and regulatory changes. It remains unclear how the United Kingdom data protection laws or regulations will develop in the medium to longer term and how data transfer to the United Kingdom from the EU will be regulated, especially following the United Kingdom's departure from the EU on January 31, 2020 without a deal. However, the United Kingdom

has transposed the GDPR into domestic law with the Data Protection Act 2018, which remains in force following the United Kingdom's departure from the EU. In addition, on June 28, 2018, the State of California enacted the California Consumer Privacy Act, or CCPA, which went into effect on January 1, 2020. The CCPA creates individual privacy rights for California consumers and increases the privacy and security obligations of entities handling certain personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. The CCPA may increase our compliance costs and potential liability, and similar laws have been proposed at the federal level and in other states.

Efforts to ensure that our current and future business arrangements with third parties will comply with applicable healthcare laws and regulations will involve on-going substantial costs. It is possible that governmental authorities will conclude that our business practices, including our arrangements with physicians, some of whom have ownership interests in us, may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, disgorgement, individual imprisonment, exclusion from participation in government funded healthcare programs, such as Medicare and Medicaid, integrity oversight and reporting obligations, contractual damages, reputational harm, diminished profits and future earnings and the curtailment or restructuring of our operations. Defending against any such actions can be costly, time-consuming and may require significant financial and personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired. Further, if any of the physicians or other healthcare providers or entities with whom we expect to do business is found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

Our business entails a significant risk of product liability and if we are unable to obtain sufficient insurance coverage such inability could have an adverse effect on our business and financial condition.

Our business exposes us to significant product liability risks inherent in the development, testing, manufacturing and marketing of therapeutic treatments. Product liability claims could delay or prevent completion of our development programs. If we succeed in marketing products, such claims could result in an FDA or other regulatory authority investigation of the safety and effectiveness of our products, our manufacturing processes and facilities or our marketing programs. FDA or other regulatory authority investigations could potentially lead to a recall of our products or more serious enforcement action, limitations on the approved indications for which they may be used or suspension or withdrawal of approvals. Regardless of the merits or eventual outcome, liability claims may also result in decreased demand for our products, injury to our reputation, costs to defend the related litigation, a diversion of management's time and our resources and substantial monetary awards to trial participants or patients. We currently have insurance that we believe is appropriate for our stage of development and may need to obtain higher levels prior to marketing any of our product candidates, if approved. Any insurance we have or may obtain may not provide sufficient coverage against potential liabilities. Furthermore, clinical trial and product liability insurance is becoming increasingly expensive. As a result, we may be unable to obtain sufficient insurance at a reasonable cost to protect us against losses caused by product liability claims that could have an adverse effect on our business and financial condition.

Any product candidates we develop may become subject to unfavorable third-party coverage and reimbursement practices, as well as pricing regulations.

The availability and extent of coverage and adequate reimbursement by third-party payors, including government health administration authorities, private health coverage insurers, managed care organizations and other third-party payors is essential for most patients to be able to afford expensive treatments. Sales of any of our product candidates that receive marketing approval will depend substantially, both in the United States and internationally, on the extent to which the costs of our product candidates will be covered and reimbursed by third-party payors. If reimbursement is not available, or is available only to limited levels, we may not be able to successfully commercialize our product candidates. 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 an adequate return on our investment. Coverage and reimbursement may impact the demand for, or the price of, any product candidate for which we obtain marketing approval. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we may not successfully commercialize any product candidate for which we obtain marketing approval.

There is significant uncertainty related to third-party payor coverage and reimbursement of newly approved products. In the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors and coverage and reimbursement levels for products can differ significantly from payor to payor. 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 and biologics. However, one third-party payor's determination to provide coverage for a product candidate does not assure that other payors will also provide coverage for the product candidate. As a result, the coverage determination process is often time-consuming and costly. This process will require us to provide scientific and clinical support for the use of our products to each third-party payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

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. Further, such payors are increasingly challenging the price, examining the medical necessity and reviewing the cost effectiveness of medical product candidates. There may be especially significant delays in obtaining coverage and reimbursement for newly approved drugs. Third-party payors may limit coverage to specific product candidates on an approved list, known as a formulary, which might not include all FDA-approved drugs for a particular indication. We may need to conduct expensive pharmacoeconomic studies to demonstrate the medical necessity and cost effectiveness of our products. Nonetheless, our product candidates may not be considered medically necessary or cost effective. We cannot be sure that coverage and reimbursement will be available for any product that we commercialize and, if reimbursement is available, what the level of reimbursement will be.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost containment initiatives in Europe, Canada and other countries has and will continue to put pressure on the pricing and usage of therapeutics such as our product candidates. In many countries, particularly the countries of the European Union, medical product prices are subject to varying price control mechanisms as part of national health systems. In these countries, pricing negotiations with governmental authorities can take considerable time after a product receives marketing approval. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. In general, product prices under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for products, but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

If we are unable to establish or sustain coverage and adequate reimbursement for any future product candidates from third-party payors, the adoption of those products and sales revenue will be adversely affected, which, in turn, could adversely affect the ability to market or sell those product candidates, if approved. Coverage policies and third-party payor reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

We face potential liability related to the privacy of health information we obtain from clinical trials sponsored by us.

Most healthcare providers, including research institutions from which we obtain patient health information, are subject to privacy and security regulations promulgated under HIPAA, as amended by the HITECH. We are not currently classified as a covered entity or business associate under HIPAA and thus are not directly subject to its requirements or penalties. However, any person may be prosecuted under HIPAA's criminal provisions either directly or under aiding-and-abetting or conspiracy principles. Consequently, depending on the facts and circumstances, we could face substantial criminal penalties if we knowingly receive individually

identifiable health information from a HIPAA-covered healthcare provider or research institution that has not satisfied HIPAA's requirements for disclosure of individually identifiable health information. In addition, we may maintain sensitive personally identifiable information, including health information, that we receive throughout the clinical trial process, in the course of our research collaborations, and directly from individuals (or their healthcare providers) who enroll in our patient assistance programs. As such, we may be subject to state laws requiring notification of affected individuals and state regulators in the event of a breach of personal information, which is a broader class of information than the health information protected by HIPAA.

Furthermore, certain health privacy laws, data breach notification laws, consumer protection laws and genetic testing laws may apply directly to our operations and/or those of our collaborators and may impose restrictions on our collection, use and dissemination of individuals' health information. Patients about whom we or our collaborators obtain health information, as well as the providers who share this information with us, may have statutory or contractual rights that limit our ability to use and disclose the information. We may be required to expend significant capital and other resources to ensure ongoing compliance with applicable privacy and data security laws. Claims that we have violated individuals' privacy rights or breached our contractual obligations, even if we are not found liable, could be expensive and time consuming to defend and could result in adverse publicity that could harm our business.

If we or third-party contract manufacturing organizations, or CMOs, CROs or other contractors or consultants fail to comply with applicable federal, state or local regulatory requirements, we could be subject to a range of regulatory actions that could affect our or our contractors' ability to develop and commercialize our product candidates and could harm or prevent sales of any affected products that we are able to commercialize, or could substantially increase the costs and expenses of developing, commercializing and marketing our products. Any threatened or actual government enforcement action could also generate adverse publicity and require that we devote substantial resources that could otherwise be used in other aspects of our business. Increasing use of social media could give rise to liability, breaches of data security or reputational damage.

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 have a material adverse effect on our business.

We 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 in the future may involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations in the future may also produce hazardous waste products. In the future, we may generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use 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.

Although we will maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the potential use of hazardous materials in the future, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of hazardous and flammable materials, including chemicals and biological 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 commercialization efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

The FDA or other comparable foreign regulatory authorities may not accept data from trials conducted in locations outside of their jurisdiction.

We may choose to conduct international clinical trials in the future. The acceptance of study data by the FDA or other comparable foreign regulatory authority from clinical trials conducted outside of their respective jurisdictions may be subject to certain conditions. In cases where data from foreign clinical trials are intended

to serve as the basis for marketing approval in the United States, the FDA will generally not approve the application on the basis of foreign data alone unless (1) the data are applicable to the United States population and United States medical practice; (2) the trials are performed by clinical investigators of recognized competence; and (3) the data may be considered valid without the need for an on-site inspection by the FDA, or if the FDA considers such an inspection to be necessary, the FDA is able to validate the data through an on-site inspection or other appropriate means. In addition, such foreign trials would be subject to the applicable local laws of the foreign jurisdictions where the trials are conducted. There can be no assurance that the FDA or any other comparable foreign regulatory authority will accept data from trials conducted outside of its applicable jurisdiction. If the FDA or any other comparable foreign regulatory authority does not accept such data, it would result in the need for additional trials, which would be costly and time-consuming and delay aspects of our business plan, and which may result in our product candidates not receiving approval for commercialization in the applicable jurisdiction.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates 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. For example, even if the FDA grants marketing approval of a product candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion and reimbursement of the product candidate in those countries. However, a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from 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.

Obtaining foreign regulatory approvals and establishing and maintaining compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we or any future collaborator fail to comply with the regulatory requirements in international markets or fail to 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.

Even if our product candidates receive regulatory approval, they will be subject to significant post-marketing regulatory requirements and oversight.

Any regulatory approvals that we may receive for our product candidates will require the submission of reports to regulatory authorities and surveillance to monitor the safety and efficacy of the product candidate, may contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, and may include burdensome post-approval study or risk management requirements. For example, the FDA may require a REMS in order to approve our product candidates, which could entail requirements for a medication guide, physician training and communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or foreign regulatory authorities approve our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our product candidates will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as on-going compliance with cGMPs and GCP for any clinical trials that we conduct post-approval. In addition, manufacturers of drug products and their facilities are subject to continual review and periodic, unannounced inspections by the FDA and other regulatory authorities for compliance with cGMP regulations and standards. If we or a regulatory agency discover previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facilities where the product is manufactured, a regulatory agency may impose restrictions on that product, the manufacturing facility or us, including requiring recall or withdrawal of the product from the market or

suspension of manufacturing. In addition, failure to comply with FDA and other comparable foreign regulatory authority requirements may subject our company to administrative or judicially imposed sanctions, including:

- delays in or the rejection of product approvals;
- restrictions on our ability to conduct clinical trials, including full or partial clinical holds on ongoing or planned trials;
- restrictions on the products, manufacturers or manufacturing process;
- warning or untitled letters;
- civil and criminal penalties;
- injunctions;
- suspension or withdrawal of regulatory approvals;
- product seizures, detentions or import bans;
- voluntary or mandatory product recalls and publicity requirements;
- total or partial suspension of production; and
- imposition of restrictions on operations, including costly new manufacturing requirements.

The occurrence of any event or penalty described above may inhibit our ability to commercialize our product candidates and generate revenue and could require us to expend significant time and resources in response and could generate negative publicity.

The FDA's and other regulatory authorities' policies may change, and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. 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 also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. We currently have a limited set of compliance policies and personnel, and intend to develop our compliance infrastructure in the future, as our clinical development programs progress. Developing a compliance infrastructure is costly and time-consuming, and even a well-designed and implemented compliance program cannot necessarily prevent all violations of relevant laws. Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenue from our product candidates, if approved. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be adversely affected.

The FDA and other regulatory agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses.

If any of our product candidates are approved and we are found to have improperly promoted off-label uses of those products, we may become subject to significant liability. The FDA and other regulatory agencies strictly regulate the promotional claims that may be made about prescription products, such as our product candidates, if approved. In particular, a product may not be promoted for uses that are not approved by the FDA or such other regulatory agencies as reflected in the product's approved labeling. If we receive marketing approval for a product candidate, physicians may nevertheless prescribe it to their patients in a manner that is inconsistent with the approved label. If we are found to have promoted such off-label uses, we may become subject to significant liability. The U.S. federal government has levied large civil and criminal fines against companies for alleged improper promotion of off-label use and has enjoined several companies from engaging in off-label promotion. The government has also required companies to enter into consent decrees or imposed permanent injunctions under which specified promotional conduct is changed or curtailed. If we cannot

successfully manage the promotion of our product candidates, if approved, we could become subject to significant liability, which would materially adversely affect our business and financial condition.

Disruptions at the FDA, the SEC and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the Securities and Exchange Commission, or the SEC, and other government agencies on which our operations may rely, including those 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 to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, in recent years, including in 2018 and 2019, the U.S. government shut down several times and certain regulatory agencies, such as the FDA and the SEC, had to furlough critical employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, upon completion of this offering and in our operations as a public company, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

Separately, in response to the COVID-19 pandemic, on March 10, 2020 the FDA announced its intention to postpone most inspections of foreign manufacturing facilities, and on March 18, 2020, the FDA temporarily postponed routine surveillance inspections of domestic manufacturing facilities. On July 10, 2020, the FDA announced its intention to resume certain on-site inspections of domestic manufacturing facilities subject to a risk-based prioritization system. The FDA intends to use this risk-based assessment system to identify the categories of regulatory activity that can occur within a given geographic area, ranging from mission critical inspections to resumption of all regulatory activities. Additionally, on April 15, 2021, the FDA issued a guidance document in which the FDA described its plans to conduct voluntary remote interactive evaluations of certain drug manufacturing facilities and clinical research sites. According to the guidance, the FDA intends to request such remote interactive evaluations in situations where an in-person inspection would not be prioritized, deemed mission-critical, or where direct inspection is otherwise limited by travel restrictions, but where the FDA determines that remote evaluation would still be appropriate. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to 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 regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

We may face difficulties from changes to current regulations and future legislation.

Existing regulatory policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. 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. 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.

For example, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, collectively referred to as the ACA, was passed, which substantially changed the way healthcare is financed by both the government and private insurers, and significantly impacts the U.S. pharmaceutical industry. The ACA, among other things, subjected biologic products to potential competition by lower-cost biosimilars; increased the minimum level of Medicaid rebates payable by manufacturers of

brand name drugs from 15.1% to 23.1% of the average manufacturer price; required collection of rebates for drugs paid by Medicaid managed care organizations; imposed a non-deductible annual fee on pharmaceutical manufacturers or importers who sell certain "branded prescription drugs" to specified federal government programs; implemented a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted, or injected; expanded eligibility criteria for Medicaid programs; required reporting of certain financial arrangements between manufacturers of biologics, physicians and teaching hospitals under the federal Physician Payments Sunshine Act; expanded the types of entities eligible for the 340B Drug Pricing Program; created a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research; and established a Center for Medicare & Medicaid Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

Since its enactment, there have been judicial, executive and Congressional challenges to certain aspects of the ACA. By way of example, the Tax Cuts and Jobs Act, or the Tax Act, was signed into law, which included a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate". On December 14, 2018, a Texas U.S. District Court Judge ruled that the ACA is unconstitutional in its entirety because the "individual mandate" was eliminated by Congress as part of the Tax Act. Additionally, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit affirmed the District Court's ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the mandate could be severed from the ACA (i.e., whether the remaining provisions of the ACA are unconstitutional as well). The U.S. Supreme Court is currently reviewing this case. The case is expected to be decided in 2021, although it is unclear how the Supreme Court will rule. It is also unclear how other efforts, if any, to challenge, repeal or replace the ACA will impact the ACA or our business.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. These changes included aggregate reductions to Medicare payments to providers of 2% per fiscal year, effective April 1, 2013, which, due to subsequent legislative amendments, will stay in effect through 2030, with the exception of a temporary suspension from May 1, 2020 through December 31, 2021 due to the coronavirus pandemic, unless additional congressional action is taken. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, reduced Medicare payments to several providers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on customers for our drugs, if approved, and accordingly, our financial operations.

Moreover, there has been heightened governmental scrutiny recently over the manner in which drug manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state 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 drug products. The likelihood of success of these and other measures initiated by the former Trump administration is uncertain, particularly in light of the new Biden administration. Since the Presidential inauguration, the Biden administration has taken several recent executive actions that signal changes in policy from the prior administration. For example, on January 20, 2021, the Biden administration directed all federal departments and agencies to consider taking steps to withdraw or delay certain regulations and guidance issued by the Trump administration that had not become effective as of January 20, 2021 to permit the Biden administration to review such actions for questions of fact, law, and policy. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Further, on May 30, 2018, the Trickett Wendler, Frank Mongiello, Jordan McLinn, and Matthew Beilina Right to Try Act of 2017, or the Right to Try Act, was signed into law. The law, among other things, provides

a federal framework for certain patients to access certain investigational new product candidates that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a drug manufacturer to make its products available to eligible patients as a result of the Right to Try Act.

We expect that other healthcare reform measures that may be adopted in the future may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our product candidates. Further, it is possible that additional governmental action is taken in response to the COVID-19 pandemic.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for biotechnology products. We cannot be sure whether additional legislative changes will be enacted, or whether FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain patent and other intellectual property protection for our product candidates and technologies or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products and technology similar or identical to ours, and our ability to successfully commercialize our products and technology may be impaired, and we may not be able to compete effectively in our market.

We rely upon a combination of patents, trademarks, trade secret protection and confidentiality agreements to protect the intellectual property related to our products and technologies and to prevent third parties from copying and surpassing our achievements, thus eroding our competitive position in our market. Our commercial success depends in part on our ability to obtain and maintain patent, trade secret or other intellectual property protection for our product candidates, proprietary technologies and their uses as well as our ability to operate without infringing the proprietary rights of others. If we are unable to protect our intellectual property rights or if our intellectual property rights are inadequate for our technology or our product candidates, our competitive position could be harmed. We generally seek to protect our proprietary position by filing patent applications in the United States and, in some cases, abroad related to our product candidates, technology platforms and their uses that are important to our business.

As of March 31, 2021, we owned pending patent applications, in the United States only, related to our platform technologies, as well as pending patent applications related to our product candidates. We currently do not have any issued patents related to our product candidates or platform technologies. Further, patent prosecution with respect to our pending patent applications related to our product candidates is in the early stages and, as such, no patent examiner has yet scrutinized the merits of such pending patent applications. Our patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless, and until, patents issue from such applications, and then only to the extent the issued claims cover the technology and such third parties practice the technology in countries where such patents have issued. With respect to our patent applications related to our platform technology, we filed those applications only in the U.S., so it is possible that a competitor may practice outside the U.S. the aspects of our platform technology disclosed in those patent applications. We maintain other aspects of our platform technology as trade secrets, which were not disclosed in those patent applications. There can be no assurance that any of our current and future patent applications, if any, owned by us or our future in-licensed patent applications will result in patents being issued or that issued patents will afford sufficient protection against competitors with similar technology, nor can there be any assurance that the patents if issued will not be infringed, designed around, invalidated or rendered unenforceable by third parties, or would effectively prevent others from

commercializing competitive products or technologies. Composition of matter patents for biological and pharmaceutical product candidates often provide a strong form of intellectual property protection for those types of products, as such patents may provide protection without regard to any method of use. We cannot be certain that the claims in our pending patent applications related to composition of matter of our product candidates will be considered patentable by the United States Patent and Trademark Office, or USPTO, or by patent offices in foreign countries, or that the claims in any of our issued patents will be considered valid and enforceable by courts in the United States or foreign countries. Method of use patents protect the use of a product for the specified method. This type of patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. The patent position of biopharmaceutical companies generally is highly uncertain, involves complex legal and factual questions, and has been the subject of much litigation in recent years. As a result, the existence, issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain.

Although we may obtain licenses to issued patents in the United States and foreign countries in the future, we cannot be certain that the claims in future in-licensed U.S. pending patent applications, if any, corresponding international patent applications and patent applications in certain foreign countries will be considered patentable by the USPTO, courts in the United States or by the patent offices and courts in foreign countries, nor can we be certain that the claims in future in-licensed issued patents will not be found invalid or unenforceable if challenged.

The patent application process is subject to numerous risks and uncertainties, and there can be no assurance that we or our licensors or any of our potential future collaborators will be successful in protecting our product candidates by obtaining and defending patents. These risks and uncertainties include the following:

- the USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process, the noncompliance with which can result in abandonment or lapse of a patent or patent application, and partial or complete loss of patent rights in the relevant jurisdiction;
- patent applications may not result in any patents being issued;
- patents may be challenged, invalidated, modified, revoked, circumvented, found to be unenforceable or otherwise may not provide any competitive advantage;
- our competitors, many of whom have substantially greater resources than we or our potential licensors do and many of whom have made significant investments in competing technologies, may seek or may have already obtained patents that will limit, interfere with or block our ability to make, use and sell our product candidates;
- there may be significant pressure on the U.S. government and international governmental bodies to limit the scope of patent protection both inside and outside the United States for disease treatments that prove successful, as a matter of public policy regarding worldwide health concerns; and
- countries other than the United States may have patent laws less favorable to patentees than the patent law typically applied by U.S. courts, allowing foreign competitors a better opportunity to create, develop and market competing products.

The patent prosecution process is also expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner or in all jurisdictions where protection may be commercially advantageous. 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 United States, but may issue as patents with claims of different scope or may be refused in other jurisdictions. It is also quite common that depending on the country, the scope of patent protection may vary for the same product or technology. For example, certain jurisdictions do not allow for patent protection with respect to method of treatment. Moreover, the scope of claims in a patent application can be significantly reduced before any claims in a patent are issued, and claim scope can be reinterpreted after issuance. Even if our current or future patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors or other third parties

from competing with us, or otherwise provide us with any competitive advantage. Consequently, we do not know whether our product candidates will be protectable or remain protected by valid and enforceable patents. Our competitors or other third parties may be able to circumvent our patents by developing similar or alternative technologies or products in a non-infringing manner, which could materially adversely affect our business, financial condition, results of operations and prospects.

It is also possible that we may not identify patentable aspects of our research and development output before it is too late to obtain patent protection. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot be certain that we were the first to make the inventions claimed in our patents or pending patent applications, or that we were the first to file for patent protection of such inventions. In addition, the USPTO might require that the term of a patent issuing from a pending patent application to be disclaimed and limited to the term of another patent that is commonly owned or names a common inventor. Moreover, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, directed to technology that we license, including those from our licensors, if any, and from third parties. We also may require the cooperation of our potential future licensors in order to enforce the licensed patent rights, and such cooperation may not be provided. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. We cannot be certain that patent prosecution and maintenance activities by our potential future licensors have been or will be conducted in compliance with applicable laws and regulations, which may affect the validity and enforceability of such patents or any patents that may issue from such applications. If they fail to do so, this could cause us to lose rights in any applicable intellectual property that we may in-license, and as a result our ability to develop and commercialize products or product candidates may be adversely affected and we may be unable to prevent competitors from making, using and selling competing products.

Even if our current or future patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Our competitors may be able to circumvent our owned or potential future in-licensed patents by developing similar or alternative technologies or products in a non-infringing manner. The issuance of a patent is not conclusive as to its scope, validity or enforceability, and our owned and any future in-licensed patents may be challenged in the courts or patent offices in the United States and abroad. We may be subject to a third party pre-issuance submission of prior art to the USPTO, or become involved in opposition, derivation, revocation, reexamination, post-grant review, or PGR, and inter partes review, or IPR, or other similar proceedings in the USPTO or foreign patent offices challenging our patent rights. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to validity of our patents, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found. There is also no assurance that there is no prior art of which we are aware, but which we do not believe affects the validity or enforceability of a claim in our patents and patent applications, which may, nonetheless, ultimately be found to affect the validity or enforceability of a claim. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate or render unenforceable, our patent rights, allow third parties to commercialize our product candidates and compete directly with us, without payment to us. Such loss of patent rights, loss of exclusivity or our patent claims being narrowed, invalidated or held unenforceable could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our product candidates. Such proceedings also may result in substantial cost and require significant time from our scientists and management, even if the eventual outcome is favorable to us. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, regardless of the outcome, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

In addition, although we enter into non-disclosure and confidentiality agreements with parties who have access to patentable or trade secret aspects of our technology platforms and research and development output, such as our employees, outside scientific collaborators, CROs, third-party manufacturers, consultants, advisors, licensors, and other third parties, any of these parties may breach such agreements and disclose such aspects

or output before a patent application is filed, thereby jeopardizing our ability to seek patent protection or maintain the trade secret status of our technology platforms or research and development output.

As referenced above, we have filed patent applications directed to our platform technologies that involve certain of our proprietary software modules. Moreover, while software and other of our proprietary works may be protected under copyright law, we have chosen not to register any copyrights in these works, and instead, rely on the above-referenced patent applications for protection of certain modules and trade secret protection for other of our software modules. In order to bring a copyright infringement lawsuit in the United States, the copyright must be registered. Accordingly, the remedies and damages available to us for unauthorized use of our software may be limited.

If we fail to comply with our obligations in future agreements under which we may license intellectual property rights from licensors and third parties or otherwise experience disruptions to our business relationships with future licensors, we could lose license rights that may in the future be important to our business.

In the future, we may enter into license agreements under which we are granted rights to intellectual property that may be important to our business. We expect that any future license agreements where we in-license intellectual property would impose on us various development, regulatory and/or commercial diligence obligations, payment of milestones and/or royalties and other obligations. If we fail to comply with our obligations under these agreements (including as a result of COVID-19 impacting our operations), or we use the licensed intellectual property in an unauthorized manner or are subject to bankruptcy-related proceedings, the licensors may have the right to materially modify the terms of the licenses, such as by rendering currently exclusive licenses non-exclusive, or terminate the licenses, in which event we would not be able to market products covered by the licenses. We may also in the future enter into license agreements with third parties under which we are a sublicensee. If our sublicensor fails to comply with its obligations under its upstream license agreement with its licensor, the licensor may have the right to terminate the upstream license, which may terminate our sublicense. If this were to occur, we would no longer have rights to the applicable intellectual property unless we are able to secure our own direct license with the owner of the relevant rights, which we may not be able to do on reasonable terms, or at all, which may impact our ability to continue to develop and commercialize our product candidates incorporating the relevant intellectual property.

We may need to obtain licenses from third parties to advance our research or allow commercialization of our product candidates or platform, and we cannot provide any assurances that third-party patents do not exist that might be enforced against our product candidates or platform in the absence of such a license. For example, our programs may involve additional product candidates that may require the use of additional proprietary rights held by third parties. Our product candidates may also require specific formulations to work effectively and efficiently. These formulations may be covered by intellectual property rights held by others. We may be unable to acquire or in-license any relevant third-party intellectual property rights that we identify as necessary or important to our business operations. We may fail to obtain any of these licenses on commercially reasonable terms, if at all. We may need to cease use of the compositions or methods covered by such third-party intellectual property rights, and may need to seek to develop alternative approaches that do not infringe such intellectual property rights which may entail additional costs and development delays, even if we were able to develop such alternatives, which may not be feasible. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. The licensing and acquisition of third-party intellectual property rights is a competitive practice, and companies that may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive for commercializing our product candidates. More established companies may have a competitive advantage over us due to their larger size and cash resources or greater clinical development and commercialization capabilities. There can be no assurance that we will be able to successfully complete such negotiations and ultimately acquire the rights to the intellectual property surrounding the additional product candidates that we may seek to acquire.

In addition, disputes may arise between us and any future licensors regarding intellectual property subject to a license agreement, including:

- the scope of rights granted and obligations imposed under the license agreement and other interpretation-related issues;

- whether and the extent to which our technology and processes infringe intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patents and other rights to third parties;
- 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;
- the amounts, if any, we owe to a potential licensor in respect of sublicense fees or income or in respect of backup product;
- our right to transfer or assign the license; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and its affiliates and sublicensees and by us and our partners and sublicensees.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our future licensing arrangements on acceptable terms, we may not be able to successfully develop and commercialize the affected product candidates, which would have a material adverse effect on our business.

In addition, certain of our agreements may limit or delay our ability to consummate certain transactions, may impact the value of those transactions, or may limit our ability to pursue certain activities. For example, we may in the future enter into license agreements that are not assignable or transferable, or that require the licensor's express consent in order for an assignment or transfer to take place.

The patent protection and patent prosecution for some of our product candidates may be dependent on our future licensors and third parties.

We or our future potential licensors may fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Therefore, we may miss potential opportunities to strengthen our patent position. It is possible that defects as to form in the preparation or filing of our potential future in-licensed patents or patent applications may exist, or may arise in the future, for example with respect to proper priority claims, inventorship, claim scope, or requests for patent term adjustments. If we or our future potential licensors fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated. If our future potential licensors are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised. If there are material defects in the form, preparation, prosecution, or enforcement of our future potential in-licensed patents or patent applications, such patents may be invalid and/or unenforceable, and such applications may never result in valid, enforceable patents. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business.

As a future potential licensee of third parties, we would rely on third parties to file and prosecute patent applications and maintain patents and otherwise protect the licensed intellectual property under some of our future license agreements. We would not have primary control over these activities for certain of our patents or patent applications and other intellectual property rights. We cannot be certain that such activities by third parties 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. Future potential licensors may have the right to control enforcement of our future potential licensed patents or defense of any claims asserting the invalidity of these patents and even if we are permitted to pursue such enforcement or defense, we will require the cooperation of our future licensors. We cannot be certain that our future licensors will allocate sufficient resources or prioritize their or our enforcement of such patents or defense of such claims 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. If any of our future potential licensors or future collaborators fail to appropriately prosecute and maintain patent protection for patents directed to 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 from making, using and selling competing products.

In addition, even where we have the right to control patent prosecution of patents and patent applications we have acquired or licensed from third parties in the future, we may still be adversely affected or prejudiced by actions or inactions of our potential licensors and their counsel that took place prior to us assuming control over patent prosecution.

Technology we may acquire or license from various third parties in the future may be subject to retained rights. Our future licensors may retain certain rights under their agreements with us, including the right to use the underlying technology for use in fields other than the fields licensed to us or for use in noncommercial academic and research use, to publish general scientific findings from research related to the technology, and to make customary scientific and scholarly disclosures of information relating to the technology. It may be difficult to monitor whether our future licensors may limit their use of the technology to these uses, and we could incur substantial expenses to enforce our rights to our licensed technology in the event of misuse.

Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties. Claims by third parties that we infringe or misappropriate their proprietary rights may result in liability for damages or prevent or delay our developmental and commercialization efforts.

Our commercial success depends in part on avoiding infringement or misappropriation of the patents and other proprietary rights of third parties. However, our research, development and commercialization activities may be subject to claims that we infringe or otherwise violate patents or other intellectual property rights owned or controlled by third parties. Because the intellectual property landscape in the industry in which we participate is rapidly evolving and interdisciplinary, it is difficult to conclusively assess our ability to freely make, use, and sell our products without infringing third party rights. Other entities may have or obtain patents or proprietary rights that could limit our ability to make, use, sell, offer for sale or import our product candidates and products that may be approved in the future, or impair our competitive position. There is a substantial amount of litigation, both within and outside the United States, involving patent and other intellectual property rights in the biopharmaceutical industry, including patent infringement lawsuits, oppositions, reexaminations, IPR proceedings and PGR proceedings before the USPTO and/or foreign patent offices. Numerous third-party U.S. and foreign issued patents and pending patent applications exist in the fields in which we are developing product candidates. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates, as well as related to our platform.

As the biopharmaceutical industry expands and more patents are issued, the risk increases that our product candidates or platform may be subject to claims of infringement of the patent rights of third parties. Because patent applications are maintained as confidential for a certain period of time, until the relevant application is published we may be unaware of third-party patents that may be infringed by commercialization of any of our product candidates, and we cannot be certain that others have not filed patent applications for a product candidate or technology covered by our pending patent applications, or that we were the first to file a patent application related to a product candidate or technology. Our competitors may have filed, and may in the future file, patent applications covering our products or technology similar to ours. Any such patent application may have priority over our patent applications or patents, which could require us to obtain rights to issued patents relating to such technologies. Moreover, because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our product candidates may infringe.

In addition, identification of third-party patent rights that may be relevant to our product candidates or platform is difficult because patent searching is imperfect due to differences in terminology among patents, incomplete databases and the difficulty in assessing the meaning of patent claims. We cannot guarantee that any of our patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we have identified each and every third-party patent and pending application in the United States and abroad that is relevant to or necessary for the commercialization of our product candidates in any jurisdiction. The scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect. For example, we may incorrectly determine that our products are not covered by a third-party patent or may incorrectly predict whether a third-party's pending application will issue with claims of relevant

scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our products.

Further, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. Any claims of patent infringement asserted by third parties would be time-consuming and could:

- result in costly litigation that may cause negative publicity;
- divert the time and attention of our technical personnel and management;
- cause development delays;
- prevent us from commercializing any of our product candidates until the asserted patent expires or is held finally invalid or unenforceable or not infringed in a court of law;
- require us to develop non-infringing technology, which may not be possible on a cost-effective basis;
- subject us to significant liability to third parties; or
- require us to enter into royalty or licensing agreements, that may not be available on commercially reasonable terms, or at all, or that might be non-exclusive, which could result in our competitors gaining access to the same technology.

Although no third party has asserted a claim of patent infringement against us as of the date of this prospectus, others may hold proprietary rights that could prevent our product candidates from being marketed. Any patent-related legal action against us claiming damages and seeking to enjoin activities relating to our product candidates or processes could subject us to potential liability for damages, including treble damages if we were determined to willfully infringe, and require us to obtain a license to manufacture or develop our product candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of management and employee resources from our business. We cannot predict whether we would prevail in any such actions or that any license required under any of these patents would be made available on commercially acceptable terms, if at all. Moreover, even if we or our future strategic partners were able to obtain a license, the rights may be non-exclusive, which could result in our competitors gaining access to the same intellectual property. In addition, we cannot be certain that we could redesign our product candidates or processes to avoid infringement, if necessary. Accordingly, an adverse determination in a judicial or administrative proceeding, or the failure to obtain necessary licenses, could prevent us from developing and commercializing our product candidates, which could harm our business, financial condition and results of operations.

Parties making claims against us may be able to sustain the costs of complex patent or trade secret litigation more effectively than we can because they have substantially greater resources. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or administrative proceedings, there is a risk that some of our confidential information could be compromised by disclosure. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise additional funds or otherwise have a material adverse effect on our business, results of operations, financial condition and prospects.

Moreover, if our product candidates or platform are found to infringe the intellectual property rights of third parties, these third parties may assert infringement claims against our future licensees and other parties with whom we have business relationships, and we may be required to indemnify those parties for any damages they suffer as a result of these claims. The claims may require us to initiate or defend protracted and costly litigation on behalf of such licensees and other parties regardless of the merits of these claims. If any of these claims succeed, we may be forced to pay damages on behalf of those parties or may be required to obtain licenses for the products they use.

We may be involved in lawsuits to protect or enforce our patents or the patents of our future licensors, which could be expensive, time-consuming and unsuccessful. Further, our future in-licensed issued patents could be found invalid or unenforceable if challenged in court.

Competitors may infringe or otherwise violate our, or our future licensors', patents, trademarks or other intellectual property. To prevent infringement or other violations, we and/or our future licensors may be

required to file claims, which can be expensive and time-consuming. Further, our future licensors may need to file such claims, but elect not to file them. In addition, in a patent infringement proceeding, a court may decide that a patent we own or license is not valid, is unenforceable and/or is not infringed. If we or any of our future licensors or potential future collaborators were to initiate legal proceedings against a third party to enforce a patent directed at one of our product candidates, the defendant could counterclaim that our patent is invalid and/or unenforceable in whole or in part. In patent litigation, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge include an alleged failure to meet any of several statutory requirements, including lack of novelty or written description, non-patentable subject matter (laws of nature, natural phenomena, or abstract idea), obviousness or non-enablement. Grounds for an unenforceability assertion could include an allegation that someone connected with prosecution of the patent intentionally withheld material information from the USPTO or the applicable foreign counterpart, or made a misleading statement, during prosecution. A litigant or the USPTO itself could challenge our patents on this basis even if we believe that we have conducted our patent prosecution in accordance with the duty of candor to the USPTO and in good faith. The outcome following such a challenge is unpredictable. With respect to challenges to the validity of our patents, there might be 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, we would lose at least part, and perhaps all, of the patent protection on such product candidate. In addition, if the breadth or strength of protection provided by our patents and patent applications or those of our future licensors is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates. Such a loss of patent protection would have a material adverse impact on our business. Even if a defendant does not prevail on a legal assertion of invalidity and/or unenforceability, our patent claims may be construed in a manner that would limit our ability to enforce such claims against the defendant and others.

Even if resolved in our favor, litigation or other legal proceedings relating to our intellectual property rights, particularly those in a foreign jurisdiction, may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. Enforcing our intellectual property rights against third parties may also cause such third parties to file other counterclaims against us, which could be costly to defend, particularly in a foreign jurisdiction, and could require us to pay substantial damages, cease the sale of certain products or enter into a license agreement and pay royalties (which may not be possible on commercially reasonable terms or at all). 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. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could compromise our ability to compete in the marketplace.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or other legal proceedings relating to our intellectual property rights, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation or other proceedings.

Intellectual property litigation may lead to unfavorable publicity that harms our reputation and causes the market price of our common shares to decline.

During the course of any intellectual property litigation, there could be public announcements of the initiation of the litigation as well as results of hearings, rulings on motions, and other interim proceedings in the litigation. If securities analysts or investors regard these announcements as negative, the perceived value of our existing products, programs or intellectual property could be diminished. Accordingly, the market price of shares of our Class A common stock may decline. Such announcements could also harm our reputation or the market for our future products, which could have a material adverse effect on our business.

Derivation or interference proceedings may be necessary to determine priority of inventions, and an unfavorable outcome may require us to cease using the related technology or to attempt to license rights from the prevailing party.

Derivation or interference proceedings provoked by third parties or brought by us or our future licensors, or declared by the USPTO or similar proceedings in foreign patent offices may be necessary to determine the

priority of inventions with respect to our or our potential future licensors' patents or patent applications. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Our or our licensors' defense of such proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. In addition, the uncertainties associated with such proceedings could have a material adverse effect on our ability to raise the funds necessary to continue our clinical trials, continue our research programs, license necessary technology from third parties or enter into development or manufacturing partnerships that would help us bring our product candidates to market.

Patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents.

In 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted and may also affect patent litigation. In particular, under the Leahy-Smith Act, the United States transitioned in March 2013 to a "first inventor to file" system in which, assuming that other requirements of patentability are met, the first inventor to file a patent application will be entitled to the patent regardless of whether a third party was first to invent the claimed invention. A third party that files a patent application in the USPTO after March 2013 but before us could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by such third party. 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 or until issuance, we cannot be certain that we were the first to either (1) file any patent application related to our product candidates or (2) invent any of the inventions claimed in our patents or patent applications. Even where we have a valid and enforceable patent, we may not be able to exclude others from practicing the claimed invention where the other party can show that they used the invention in commerce before our filing date or the other party benefits from a compulsory license.

The Leahy-Smith Act also includes a number of significant changes that (i) affect the way patent applications are prosecuted, (ii) redefine prior art, and (iii) provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. These include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including PGR, IPR, and derivation proceedings. An adverse determination in any such submission or proceeding could reduce the scope or enforceability of, or invalidate, our patent rights, which could adversely affect our competitive position.

Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts 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 have been insufficient to invalidate the claim if presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. Thus, the Leahy-Smith Act and its implementation increase the uncertainties and costs surrounding the prosecution of our or our future licensors' 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 prospects.

Changes in U.S. patent law, or laws in other countries, could diminish the value of patents in general, thereby impairing our ability to protect our product candidates.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involves a high degree of technological and legal complexity. Therefore, obtaining and enforcing biopharmaceutical patents is costly, time-consuming and inherently uncertain. Changes in either the patent laws or in the

interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property and may increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. Further, the laws of foreign countries may not protect our rights to the same extent as the laws of the United States. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents.

In addition, Congress or other foreign legislative bodies may pass patent reform legislation that is unfavorable to us. For example, 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 or our future licensors' 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 U.S. federal courts, the USPTO, or similar authorities in foreign jurisdictions, the laws and regulations governing patents could change in unpredictable ways that would weaken our or our licensors' ability to obtain new patents or to enforce our existing patents and patents we might obtain in the future.

We or our future licensors may be subject to claims challenging the inventorship or ownership of our or our future in-licensed patents and other intellectual property.

We may also be subject to claims that former employees or other third parties have an ownership interest in our patents or other intellectual property. The failure to name the proper inventors on a patent application can result in the patents issuing thereon being unenforceable. Inventorship disputes may arise from conflicting views regarding the contributions of different individuals named as inventors, the effects of foreign laws where foreign nationals are involved in the development of the subject matter of the patent, conflicting obligations of third parties involved in developing our product candidates or as a result of questions regarding co-ownership of potential joint inventions. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership. If we or our future licensors fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights. Such an outcome could have a material adverse effect on our business. Even if we or our future licensors are successful in defending against such claims, litigation could result in substantial costs and distraction to management and other employees.

Our future licensors may have relied on third-party consultants or collaborators or on funds from third parties, such as the U.S. government, such that our future licensors are not the sole and exclusive owners of any patents we may in-license. If other third parties have ownership rights or other rights to our in-licensed patents, they may be able to license such patents to our competitors, and our competitors could market competing products and technology. This could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

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.

Patent terms may be inadequate to protect our competitive position on our product candidates for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions may be available, but the term of a patent, and the protection it affords, is limited. Even if patents directed to our product candidates are obtained, once the patent term has expired, we may be open to competition from competitive products. Given the amount of time required for the development, testing and regulatory review of product candidates, patents directed to our product candidates might expire before or shortly after such

candidates are commercialized. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

Depending upon the timing, duration and specifics of FDA marketing approval of our product candidates, one or more of our U.S. patents may be eligible for limited patent term restoration under the Drug Price Competition and Patent Term Restoration Act of 1984, or 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 product development and the FDA regulatory review process. A maximum of one patent may be extended per FDA-approved product 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 product 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. However, we or our licensors may not be granted an extension because of, for example, 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 period or the scope of patent protection afforded could be less than we request. If we or our licensors are unable to obtain patent term extension or restoration or the term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our revenue could be reduced, possibly materially. Further, if this occurs, our competitors may take advantage of our investment in development and trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be the case.

We may not be able to protect our intellectual property rights throughout the world.

Although we have pending patent applications in the United States and we seek to file patent applications in certain other countries, filing, prosecuting and defending patents in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies 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 or our licensors have patent protection but enforcement is not as strong as that in the United States. These products may compete with our product candidates, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of many foreign countries do not favor the enforcement of patents and other intellectual property protection, which could make it difficult for us to stop the infringement of our or our licensors' patents or marketing of competing products in violation of our proprietary rights. Proceedings to enforce our or our potential future licensors' patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our or our potential future licensors' patents at risk of being invalidated or interpreted narrowly and our or our potential future licensors' patent applications at risk of not issuing and could provoke third parties to assert claims against us. We or our licensors may not prevail in any lawsuits that we or our potential future licensors initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our or our potential future licensors' 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 in-license.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or our licensors are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be adversely affected.

Obtaining and maintaining our patent protection depends on compliance with various procedural, documentary, fee payment and other requirements imposed by regulations and 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 and/or applications will be due to the USPTO and various foreign patent offices at various points over the lifetime of our patents and/or applications. We have systems in place to remind us to pay these fees, and we rely on third parties to pay these fees when due. Additionally, the USPTO and various foreign patent offices 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 rules applicable to the particular jurisdiction. While an inadvertent lapse, including due to the effect of the COVID-19 pandemic on us, our patent maintenance vendors or law firms, can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance 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. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we fail to maintain the patents and patent applications relating to our product candidates, our competitive position would be adversely affected.

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

In addition to seeking patent protection for some of our technology and product candidates, we rely on the protection of our trade secrets, including unpatented know-how, technology and other proprietary information to maintain our competitive position, especially with respect to our technology platform. Any disclosure, either intentional or unintentional, by our employees or third-party consultants and vendors that we engage to perform research, clinical trials or manufacturing activities, or misappropriation by third parties (such as through a cybersecurity breach) of our trade secrets or proprietary information could enable competitors to duplicate or surpass our technological achievements, thus eroding our competitive position in our market. Because we expect to rely on third parties in the development and manufacture of our product candidates, we must, at times, share trade secrets with them. Our reliance on third parties may require us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Although we have taken steps to protect our trade secrets and unpatented know-how, including entering into non-disclosure and confidentiality agreements with third parties who are given access to them, such as our corporate collaborators, outside scientific collaborators, contract research organizations, contract manufacturers, consultants, advisors and other third parties. With our consultants, contractors and outside scientific collaborators, these agreements typically include invention assignment obligations. We cannot guarantee that we have entered into such agreements with each party that may have or has had access to our trade secrets or proprietary technology and processes. Further, we cannot provide any assurances that all such agreements have been duly executed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. In addition, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. We may need to share our proprietary information, including trade secrets, with future business 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.

Moreover, third parties may still obtain this information or may come upon this or similar information independently, and we would have no right to prevent them from using that technology or information to compete with us. If any of these events occurs or if we otherwise lose protection for our trade secrets, the value

of this information may be greatly reduced and our competitive position would be harmed. If we or our licensors do not apply for patent protection prior to such publication or if we cannot otherwise maintain the confidentiality of our proprietary technology and other confidential information, then our ability to obtain patent protection or to protect our trade secret information may be jeopardized.

We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and we may not have adequate remedies for any breach.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information or alleged trade secrets of third parties or competitors or are in breach of non-competition or non-solicitation agreements with our competitors or their former employers.

As is common in the pharmaceutical and biotechnology industries, we employ individuals and engage the services of consultants who previously worked for other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that we have wrongfully hired an employee from a competitor or that we or our employees have wrongfully used or disclosed alleged confidential information, trade secrets or other proprietary information of their former employers, or that our consultants have used or disclosed trade secrets or other proprietary information of their former or current clients. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel, which could adversely affect our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to our management team and other employees.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

We use and will continue to use registered and/or unregistered trademarks or trade names to brand and market ourselves and our products. Our trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition among potential partners or customers in our markets of interest. 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. In addition, there could be potential trade name or trademark infringement claims brought by owners of other trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Over the long term, if we are unable to 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. We may license our trademarks and trade names to third parties, such as distributors. Though these license agreements may provide guidelines for how our trademarks and trade names may be used, a breach of these agreements or misuse of our trademarks and tradenames by our licensees may jeopardize our rights in or diminish the goodwill associated with our trademarks and trade names.

Moreover, any name we have proposed to use with our product candidate in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. Similar requirements exist in Europe. The FDA typically conducts a review of proposed product names, including an evaluation of potential for confusion with other product names. If the FDA (or an equivalent administrative body in a foreign jurisdiction) objects to any of our proposed proprietary product names, it may be required to expend significant additional resources in an effort to identify a suitable substitute name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. Furthermore, in many countries, owning and maintaining a trademark registration may not provide an adequate defense against a subsequent infringement claim asserted by the owner of a senior trademark.

We use third-party open source software, which could negatively affect our ability to offer our solutions and subject us to litigation or other actions.

We use open source software licensed to us by third-party authors under “open source” licenses in our platform and solutions and expect to continue to use such open source software in the future. Use and distribution of

open source software may entail greater risks than use of third-party commercial software, as open source licensors generally do not provide support, warranties, indemnification or other contractual protections regarding infringement claims or the quality of the code. To the extent that our platform depends upon the successful operation of open source software, any undetected errors or defects in this open source software could prevent the deployment or impair the functionality of our platform, delay introductions of new solutions, result in a failure of our platform, and injure our reputation. For example, undetected errors or defects in open source software could render it vulnerable to breaches or security attacks, and, as a result, possibly make our systems more vulnerable to data breaches. In addition, the public availability of such software may make it easier for others to compromise our platform.

Further, there are uncertainties regarding the proper interpretation of and compliance with open source licenses, and there is a risk that such licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to use such open source software, and consequently to provide or distribute our platform and solutions. Some open source licenses contain express requirements that we make available source code for modifications or derivative works we create based upon the type of open source software we use, or grant other licenses to our intellectual property. If we combine our proprietary software with open source software in a certain manner, we could, under certain open source licenses, be required to release the source code of our proprietary software to the public. This would allow our competitors to create similar offerings with lower development effort and time and ultimately could result in a loss of our competitive advantages. Alternatively, to avoid the public release of the affected portions of our source code, we could be required to expend substantial time and resources to re-engineer some or all of our software.

Despite our efforts to monitor our use of open source software to avoid subjecting our platform to conditions we do not intend, there is a risk that open source licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to provide or distribute our platform. Additionally, we may from time to time face claims from third parties claiming ownership of, or seeking to enforce the terms of, an open source license, including by demanding release of source code for the open source software, derivative works or our proprietary source code that was developed using, or that is distributed with, such open source software. These claims could also result in litigation and could require us to make our proprietary software source code freely available, devote additional research and development resources to re-engineer our platform, seek costly licenses from third parties, pay monetary damages to the owner of the copyright in the relevant open source software or otherwise incur additional costs and expenses, any of which could result in reputational harm and would have a negative effect on our business and results of operations. In addition, if the license terms for the open source software we utilize change, we may be forced to re-engineer our platform, incur additional costs to comply with the changed license terms or replace the affected open source software. Although we have implemented policies to regulate the use and incorporation of open source software into our platform and solutions, we cannot be certain that that such policies will be effective and that we have not incorporated open source software in our platform and solutions in a manner that is inconsistent with such policies.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage.

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

- others may be able to develop products that are similar to our product candidates but that are not covered by the claims of the patents that we may own or license;
- we or our potential future licensors might not have been the first to make the inventions covered by the issued patents or patent application that we may own or license;
- we or our potential future licensors might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- it is possible that our or our future licensors' pending patent applications will not lead to issued patents;

- future issued patents that we own or license may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- 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 may not develop additional proprietary technologies that are patentable; and
- the patents of others may have an adverse effect on our business.

Should any of these events occur, it could significantly harm our business, results of operations and prospects.

Risks Related to Employee Matters and Managing our Growth

If we are unable to establish sales or marketing capabilities or enter into agreements with third parties to sell or market our product candidates, we may not be able to successfully sell or market our product candidates that obtain regulatory approval.

We currently do not have and have never had a marketing or sales team. In order to commercialize any product candidates, if approved, we must build marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services for each of the territories in which we may have approval to sell or market our product candidates. We may not be successful in accomplishing these required tasks.

Establishing an internal sales or marketing team with technical expertise and supporting distribution capabilities to commercialize our product candidates will be expensive and time-consuming, and will require significant attention of our executive officers to manage. Any failure or delay in the development of our internal sales, marketing and distribution capabilities could adversely impact the commercialization of any of our product candidates that we obtain approval to market, if we do not have arrangements in place with third parties to provide such services on our behalf. Alternatively, if we choose to collaborate, either globally or on a territory-by-territory basis, with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or in lieu of our own sales force and distribution systems, we will be required to negotiate and enter into arrangements with such third parties relating to the proposed collaboration. If we are unable to enter into such arrangements when needed, on acceptable terms, or at all, we may not be able to successfully commercialize any of our product candidates that receive regulatory approval or any such commercialization may experience delays or limitations. If we are unable to successfully commercialize our approved product candidates, either on our own or through collaborations with one or more third parties, our future product revenue will suffer and we may incur significant additional losses.

Our success is highly dependent on our ability to attract and retain highly skilled executive officers and employees.

To succeed, we must recruit, retain, manage and motivate qualified clinical, scientific, technical and management personnel, and we face significant competition for experienced personnel. We are highly dependent on the principal members of our management and scientific and medical staff. If we do not succeed in attracting and retaining qualified personnel, particularly at the management level, it could adversely affect our ability to execute our business plan and harm our results of operations. In particular, the loss of one or more of our executive officers could be detrimental to us if we cannot recruit suitable replacements in a timely manner. The competition for qualified personnel in the biotechnology field is intense and as a result, we may be unable to continue to attract and retain qualified personnel necessary, including bioinformatics and computational biologist specialists, for the future success of our business. We could in the future have difficulty attracting experienced personnel to our company and may be required to expend significant financial resources in our employee recruitment and retention efforts.

Many of the other biotechnology companies that we compete against for qualified personnel have greater financial and other resources, different risk profiles and a longer history in the industry than we do. They also may provide more diverse opportunities and better prospects for career advancement. Some of these characteristics may be more appealing to high-quality candidates than what we have to offer. If we are unable

to continue to attract and retain high-quality personnel, the rate and success at which we can discover, develop and commercialize our product candidates will be limited and the potential for successfully growing our business will be harmed.

In order to successfully implement our plans and strategies, we will need to grow the size of our organization, and we may experience difficulties in managing this growth.

As of March 31, 2021, we have 32 full-time employees, including 29 employees engaged in research and development. In order to successfully implement our development and commercialization plans and strategies, and as we transition into operating as a public company, we expect to need additional managerial, operational, sales, marketing, financial and other personnel. Future growth would impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our internal development efforts effectively, including the clinical, FDA and other comparable foreign regulatory agencies' review process of IMM-1-104 and any other product candidate we develop, while complying with any contractual obligations to contractors and other third parties we may have; and
- improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to successfully develop and, if approved, commercialize IMM-1-104 and any other product candidate will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services, including key aspects of clinical development and manufacturing. We cannot assure you that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by third party service providers is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain marketing approval of any current or future product candidates or otherwise advance our business. We cannot assure you that we will be able to manage our existing third party service providers or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring new employees and/or engaging additional third party service providers, we may not be able to successfully implement the tasks necessary to further develop and commercialize IMM-1-104 and any other current or future product candidates and, accordingly, may not achieve our research, development and commercialization goals.

Risks Related to This Offering and Ownership of Our Class A Common Stock

There has been no prior public market for our Class A common stock. We do not know whether an active, liquid and orderly trading market will develop for our Class A common stock or what the market price of our Class A common stock will be and as a result it may be difficult for you to sell your shares of our Class A common stock.

Prior to this offering, no public market for shares of our Class A common stock existed and an active trading market for our Class A common stock may never develop or be sustained following this offering. We will determine the initial public offering price for our Class A common stock through negotiations with the underwriters, and the negotiated price may not be indicative of the market price of our Class A common stock after this offering. The market value of our Class A common stock may decrease from the initial public offering price. As a result of these and other factors, you may be unable to resell your shares of our Class A common stock at or above the initial public offering price. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair market value of your shares. Furthermore, an inactive market may also impair our ability to raise capital by selling shares of our Class A common stock and may impair our

ability to enter into strategic collaborations or acquire companies, technologies or other assets by using our shares of Class A common stock as consideration.

The price of our stock may be volatile, and you could lose all or part of your investment.

The trading price of our Class A common stock following this offering is likely to be highly volatile and subject to wide fluctuations in response to various factors, some of which we cannot control. The stock market in general, and pharmaceutical and biotechnology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. The trading prices for Class A common stock of other pharmaceutical and biotechnology companies have also been highly volatile as a result of the COVID-19 pandemic.

Broad market and industry factors may negatively affect the market price of our Class A common stock, regardless of our actual operating performance. In addition to the factors discussed in this "Risk Factors" section and elsewhere in this prospectus, these factors include:

- the timing and results of preclinical studies and clinical trials of our product candidates or those of our competitors;
- the success of competitive products or announcements by potential competitors of their product development efforts;
- regulatory actions with respect to our products or our competitors' products;
- actual or anticipated changes in our growth rate relative to our competitors;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- announcements by us or our competitors of significant acquisitions, strategic collaborations, joint ventures, collaborations or capital commitments;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- market conditions in the pharmaceutical and biotechnology sector;
- changes in the structure of healthcare payment systems;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- announcement or expectation of additional financing efforts;
- sales of our Class A common stock by us, our insiders or our other stockholders;
- expiration of market stand-off or lock-up agreements;
- the ongoing and future impact of the COVID-19 pandemic, or any future pandemics, and actions taken to slow their spread; and
- general economic, industry and market conditions.

The realization of any of the above risks or any of a broad range of other risks, including those described in this "Risk Factors" section, could have a dramatic and adverse impact on the market price of our Class A common stock.

Our management team has broad discretion to use the net proceeds from this offering and its investment of these proceeds may not yield a favorable return. They may invest the net proceeds from this offering in ways with which investors disagree.

We plan to use the net proceeds from this offering to advance IMM-1-104 into clinical development, including to fund our anticipated Phase 1 clinical trial of IMM-1-104 for the treatment of advanced solid tumors in

patients harboring RAS mutant tumors, and additional clinical trials; advance our other preclinical drug programs and the design and development of new product candidates, in oncology and neuroscience, and to advance these programs into IND-enabling studies that would support an IND filing for one or more product candidates; and for working capital and other general corporate purposes, including the continued advancement of our platform and hiring of additional staff as we expand our operations. See "Use of Proceeds." However, within the scope of our plan, and in light of the various risks to our business, including those discussed in this "Risk Factors" section and elsewhere in this prospectus, our management will have broad discretion over the use of net proceeds from this offering, and could spend the net proceeds in ways our stockholders may not agree with or that do not yield a favorable return, if at all. If we do not invest or apply the net proceeds from this offering in ways that improve our results of operations, we may fail to achieve expected financial results, which could cause our stock price to decline.

If securities or industry analysts do not publish research or reports, or if they publish adverse or misleading research or reports, regarding us, our business or our market, our stock price and trading volume could decline.

The trading market for our Class A common stock will be influenced by the research and reports that securities or industry analysts publish about us, our business or our market. We do not currently have and may never obtain research coverage by securities or industry analysts. If no or few securities or industry analysts commence coverage of us, the stock price would be negatively impacted. In the event we obtain securities or industry analyst coverage, if any of the analysts who cover us issue adverse or misleading research or reports regarding us, our business model, our intellectual property, our stock performance or our market, or if our results of operations fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume 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.

Prior to this offering, our executive officers, directors, holders of 5% or more of our capital stock and their respective affiliates beneficially owned approximately % of our voting stock and, upon the closing of this offering, that same group will beneficially own approximately % of our outstanding voting stock (based on the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and assuming no exercise of the underwriters' option to purchase additional shares). Therefore, even after this offering these stockholders will be able to influence us through this ownership position. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control 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 Class A common stock that you may feel are in your best interest as one of our stockholders. The interests of this group of stockholders may not always coincide with your interests or the interests of other stockholders and they may act in a manner that advances their best interests and not necessarily those of other stockholders, including seeking a premium value for their Class A common stock, and might affect the prevailing market price for our Class A common stock.

If you purchase shares of our Class A common stock in our initial public offering, you will experience substantial and immediate dilution.

The initial public offering price of $ per share is substantially higher than the net tangible book value per share of our outstanding Class A common stock immediately following the completion of this offering. If you purchase shares of Class A common stock in this offering, you will experience substantial and immediate dilution in the pro forma net tangible book value per share of $ per share as of March 31, 2021. That is because the price that you pay will be substantially greater than the pro forma net tangible book value per share of the Class A common stock that you acquire. This dilution is due in large part to the fact that our earlier investors paid substantially less than the initial public offering price when they purchased their shares of our capital stock. You will experience additional dilution when those holding stock options or warrants exercise their right to purchase Class A common stock under our equity incentive plans or when we otherwise issue additional shares of Class A common stock. See "Dilution."

Sales of a substantial number of shares of our Class A common stock in the public market could cause our stock price to fall.

Our Class A common stock price could decline as a result of sales of a large number of shares of Class A and/or Class B common stock (collectively, including Class A common stock shares issuable upon conversion of the Class B common stock, the "common stock") after this offering or the perception that these sales could occur. These sales, or the possibility that these sales may occur, might also make it more difficult for us to sell equity securities in the future at a time and price that we deem appropriate.

Upon the completion of this offering, shares of common stock will be outstanding (shares if the underwriters exercise their option to purchase additional shares from us in full), based on the number of shares outstanding as of March 31, 2021.

All shares of Class A common stock expected to be sold in this offering will be freely tradable without restriction or further registration under the Securities Act of 1933, as amended, or the Securities Act, unless held by our "affiliates" as defined in Rule 144 under the Securities Act. The resale of the remaining shares, or % of our outstanding shares of common stock following this offering, is currently prohibited or otherwise restricted as a result of securities law provisions, market standoff agreements entered into by certain of our stockholders with us or lock-up agreements entered into by our stockholders with the underwriters in connection with this offering. However, subject to applicable securities law restrictions, these shares will be able to be sold in the public market beginning 181 days after the date of this prospectus. Shares issued upon the exercise of stock options and warrants outstanding under our equity incentive plans or pursuant to future awards granted under those plans will become available for sale in the public market to the extent permitted by the provisions of applicable vesting schedules, market stand-off agreements and/or lock-up agreements, as well as Rules 144 and 701 under the Securities Act. For more information, see "Shares Eligible for Future Sale."

Upon the completion of this offering, the holders of approximately shares, or % of our outstanding shares following this offering, of our common stock will have rights, subject to some conditions, to require us to file registration statements covering the sale of their shares or to include their shares in registration statements that we may file for ourselves or our other stockholders. We also intend to register the offer and sale of all shares of Class A common stock that we may issue under our equity compensation plans. Once we register the offer and sale of shares for the holders of registration rights and shares that may be issued under our equity incentive plans, these shares will be able to be sold in the public market upon issuance, subject to the lock-up agreements described under "Underwriting."

In addition, in the future, we may issue additional shares of Class A common stock, or other equity or debt securities convertible into Class A common stock, in connection with a financing, acquisition, employee arrangement or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and could cause the price of our Class A common stock to decline.

We do not currently intend to pay dividends on our Class A common stock and, consequently, your ability to achieve a return on your investment will depend on appreciation of the value of our Class A common stock.

We have never declared or paid any cash dividends on our equity securities. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to any appreciation in the value of our Class A common stock, which is not certain.

Provisions in our certificate of incorporation and bylaws and Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the market price of our Class A common stock.

Our certificate of incorporation and bylaws, as we expect they will be in effect upon closing of the offering, will contain provisions that could depress the market price of our Class A common stock by acting to discourage, delay or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions, among other things:

- establish a classified board of directors so that not all members of our board are elected at one time;

- permit only the board of directors to establish the number of directors and fill vacancies on the board;
- provide that directors may only be removed "for cause" and only with the approval of two-thirds of our stockholders;
- authorize the issuance of "blank check" preferred stock that our board could use to implement a stockholder rights plan (also known as a "poison pill");
- eliminate the ability of our stockholders to call special meetings of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- prohibit cumulative voting;
- authorize our board of directors to amend the bylaws;
- establish advance notice requirements for nominations for election to our board or for proposing matters that can be acted upon by stockholders at annual stockholder meetings; and
- require a super-majority vote of stockholders to amend some provisions described above.

In addition, Section 203 of the General Corporation Law of the State of Delaware, or the DGCL, prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

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

Our amended and restated certificate of incorporation and amended and restated bylaws will provide for an exclusive forum in the Court of Chancery of the State of Delaware for certain disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that the Court of Chancery of the State of Delaware (or, in the event that the Court of Chancery does not have jurisdiction, the federal district court for the District of Delaware or other state courts of the State of Delaware) is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of fiduciary duty, any action asserting a claim against us arising pursuant to the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine; provided that, the exclusive forum provision will not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction; and provided further that, if and only if the Court of Chancery of the State of Delaware dismisses any such action for lack of subject matter jurisdiction, such action may be brought in another state or federal court sitting in the State of Delaware. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause or causes of action against any defendant arising under the Securities Act. Such provision is intended to benefit and may be enforced by us, our officers and directors, employees and agents, including the underwriters and any other professional or entity who has prepared or certified any part of this prospectus. Nothing in our amended and restated certificate of incorporation or amended and restated bylaws preclude stockholders that assert claims under the Exchange Act from bringing such claims in state or federal court, subject to applicable law.

We believe these provisions may benefit us by providing increased consistency in the application of Delaware law and federal securities laws by chancellors and judges, as applicable, particularly experienced in resolving corporate disputes, efficient administration of cases on a more expedited schedule relative to other forums

and protection against the burdens of multi-forum litigation. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims or make such lawsuits more costly for stockholders, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder. Furthermore, the enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. 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. If a court were to find the choice of forum provision that will be contained in our amended and restated certificate of incorporation and amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

General Risks

Our internal computer systems, or those of any of our CROs, manufacturers, other contractors, consultants, collaborators or potential future collaborators, may fail or suffer security or data privacy breaches or other unauthorized or improper access to, use of, or destruction of our proprietary or confidential data, employee data, or personal data, which could result in additional costs, loss of revenue, significant liabilities, harm to our brand and material disruption of our operations.

Despite the implementation of security measures, our internal computer systems and those of our current and any future CROs and other contractors, consultants, collaborators and third-party service providers, are vulnerable to damage from computer viruses, cybersecurity threats, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failure. If such an event were to occur and cause interruptions in our operations or result in the unauthorized acquisition of or access to personally identifiable information or individually identifiable health information (violating certain privacy laws such as HIPAA, HITECH and GDPR), it could result in a material disruption of our drug discovery and development programs and our business operations, whether due to a loss of our trade secrets or other similar disruptions. Some of the federal, state and foreign government requirements include obligations of companies to notify individuals of security breaches involving particular personally identifiable information, which could result from breaches experienced by us or by our vendors, contractors, or organizations with which we have formed strategic relationships. Notifications and follow-up actions related to a security breach could impact our reputation, cause us to incur significant costs, including legal expenses and remediation costs. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the lost data. We also rely on third parties to manufacture our product candidates, and similar events relating to their computer systems could also have a material adverse effect on our business. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data, or inappropriate disclosure of confidential or proprietary information, we could be exposed to litigation and governmental investigations, the further development and commercialization of our product candidates could be delayed, and we could be subject to significant fines or penalties for any noncompliance with certain state, federal and/or international privacy and security laws.

Our insurance policies may not be adequate to compensate us for the potential losses arising from any such disruption, failure or security breach. In addition, such insurance may not be available to us in the future on economically reasonable terms, or at all. Further, our insurance may not cover all claims made against us and could have high deductibles in any event, and defending a suit, regardless of its merit, could be costly and divert management attention.

Our operations are vulnerable to interruption by fire, severe weather conditions, power loss, telecommunications failure, terrorist activity, future pandemics and other events beyond our control, which could harm our business.

Our facilities are located in regions which experience severe weather from time to time. We have not undertaken a systematic analysis of the potential consequences to our business and financial results from a major tornado, flood, fire, earthquake, power loss, terrorist activity, future pandemics or other disasters and do not have a

recovery plan for such disasters. In addition, we do not carry sufficient insurance to compensate us for actual losses from interruption of our business that may occur, and any losses or damages incurred by us could harm our business. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

We are an "emerging growth company," and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our Class A common stock less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act. For as long as we continue to be an emerging growth company, we intend to take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure in this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding the communication of critical audit matters in the auditor's report on financial statements;
- reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements; and
- exemptions from the requirements of holding nonbinding advisory stockholder votes on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We cannot predict if investors will find our Class A common stock less attractive because we may rely on these exemptions. If some investors find our Class A common stock less attractive as a result, there may be a less active trading market for our Class A common stock and our stock price may be more volatile.

We will remain an emerging growth company until the earliest to occur of: (1) the last day of the fiscal year in which we have more than $1.07 billion in annual revenue; (2) the date we qualify as a "large accelerated filer," with at least $700 million of equity securities held by non-affiliates; (3) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period; and (4) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We intend to take advantage of the extended transition period for adopting new or revised accounting standards under the JOBS Act as an emerging growth company. As a result of this election, our financial statements may not be comparable to companies that comply with public company effective dates.

The requirements of being a public company may strain our resources, result in more litigation and divert management's attention.

As a public company, we will be subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, the listing requirements of Nasdaq and other applicable securities rules and regulations. Complying with these rules and regulations has increased and will increase our legal and financial compliance costs, make some activities more difficult, time consuming or costly and increase demand on our systems and resources. The Exchange Act requires, among other things, that we file annual, quarterly and current reports with respect to our business and results of operations. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are required to disclose changes made in our internal control and procedures on a quarterly basis. In order to maintain and, if required, improve our disclosure controls and procedures and internal control over financial reporting to meet this standard, significant resources and management oversight may be required. As a result, management's attention may be diverted from other business concerns, which could adversely affect our

business and results of operations. We may also need to hire additional employees or engage outside consultants to comply with these requirements, which will increase our costs and expenses.

In addition, changing laws, regulations and standards relating to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs and making some activities more time consuming. These laws, regulations and standards are subject to varying interpretations, in many cases due to their lack of specificity and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to their application and practice, regulatory authorities may initiate legal proceedings against us and our business may be adversely affected.

These new rules and regulations may make it more expensive for us to obtain director and officer liability insurance and, in the future, we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

By disclosing information in this prospectus and in future filings required of a public company, our business and financial condition will become more visible, which we believe may result in threatened or actual litigation, including by competitors and other third parties. If those claims are successful, our business could be seriously harmed. Even if the claims do not result in litigation or are resolved in our favor, the time and resources needed to resolve them could divert our management's resources and seriously harm our business.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, stockholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our Class A common stock.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404, or any subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our financial statements or identify other areas for further attention or improvement. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our stock.

We will be required to disclose changes made in our internal controls and procedures on a quarterly basis and our management will be required to assess the effectiveness of these controls annually. However, for as long as we are a smaller reporting company, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal controls over financial reporting pursuant to Section 404. An independent assessment of the effectiveness of our internal controls over financial reporting could detect problems that our management's assessment might not. Undetected material weaknesses in our internal controls over financial reporting could lead to restatements of our financial statements and require us to incur the expense of remediation.

We may be subject to securities litigation, which is expensive and could divert management attention.

The market price of our Class A common stock may be volatile and, in the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation.

We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

New tax legislation may impact our results of operations and financial condition.

The U.S. government may enact significant changes to the taxation of business entities including, among others, an increase in the corporate income tax rate, an increase in the tax rate applicable to the global intangible low-taxed income and elimination of certain exemptions, and the imposition of minimum taxes or surtaxes on certain types of income. No specific United States tax legislation has been proposed at this time and the likelihood of these changes being enacted or implemented is unclear. We are currently unable to predict whether such changes will occur. If such changes are enacted or implemented, we are currently unable to predict the ultimate impact on our business.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that can involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial position, business strategy, prospective products, product approvals, research and development costs, future revenue, timing and likelihood of success, plans and objectives of management for future operations, future results of anticipated products and prospects, plans and objectives of management are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important 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 the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as “anticipate,” “believe,” “contemplate,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “will,” or “would” or the negative of these terms or other similar expressions, although not all forward-looking statements contain these words. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- the timing, progress and results of clinical trials and preclinical studies for our programs and product candidates, including statements regarding the timing of initiation and completion of trials or studies and related preparatory work, the period during which the results of the trials will become available and our research and development programs;
- our expectations regarding the potential clinical efficacy and safety of our programs and product candidates;
- the timing, scope or likelihood of regulatory submissions, filings and approvals;
- our ability to discover, develop and advance product candidates into, and successfully complete, clinical trials;
- our expectations regarding the potential market size and size of the patient populations for our product candidates, if approved for commercial use;
- the implementation of our business model and our strategic plans for our business, commercial product, product candidates, platform and technology;
- our commercialization, marketing and manufacturing capabilities and strategy;
- the pricing and reimbursement of our commercial product and product candidates, if approved;
- the rate and degree of market acceptance and clinical utility of our commercial product and product candidates;
- our ability to establish or maintain collaborations or strategic relationships or obtain additional funding;
- our competitive position and the competitive position of our programs, product candidates and platform;
- the scope of protection we and/or our licensors are able to establish and maintain for intellectual property rights covering our commercial product and product candidates;
- developments and projections relating to our competitors and our industry;
- our expectations related to the use of proceeds from this offering;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- the impact of laws and regulations;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act; and
- the impact of the COVID-19 pandemic and potential future pandemics.

We have based these forward-looking statements largely on our current expectations and projections about our business, the industry in which we operate and financial trends that we believe may affect our business, financial condition, results of operations and prospects, and these forward-looking statements are not guarantees of future performance or development. These forward-looking statements speak only as of the date of this prospectus and are subject to a number of risks, uncertainties and assumptions described in the section titled "Risk Factors" and elsewhere in this prospectus. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking 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.

In addition, statements that "we believe" and similar statements such as "may," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential" and "continue" 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.

This prospectus also contains estimates, projections and other information concerning our industry, our business and the markets for our programs and product candidates. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Unless otherwise expressly stated, we obtained this industry, business, market, and other data from our own internal estimates and research as well as from reports, research surveys, studies, and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources. 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.

USE OF PROCEEDS

We estimate that the net proceeds to us from in this offering will be approximately $ million, assuming 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, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters' option to purchase additional shares from us is exercised in full, we estimate that our net proceeds will be approximately $ million.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the net proceeds to us from this offering by approximately $ million, 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 underwriting discounts and commissions and estimated offering expenses payable by us. Each increase (decrease) of 1.0 million in the number of shares we are offering would increase (decrease) the net proceeds to us from this offering, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, by $ million, assuming the assumed initial public offering price stays the same.

We intend to use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows:

- approximately $ million to advance IMM-1-104 into clinical development, including to fund our planned Phase 1 clinical trial of IMM-1-104 for the treatment of advanced solid tumors in patients harboring RAS mutant tumors;
- approximately $ million to advance our other preclinical drug programs and the design and development of new product candidates, in oncology and neuroscience, and to advance these programs into IND-enabling studies that would support an IND filing for one or more product candidates; and
- the remainder for working capital and other general corporate purposes, including the continued advancement of our platform and hiring of additional staff as we expand our operations.

This expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. We may also use a portion of the net proceeds to in-license, acquire or invest in additional businesses, technologies, products or assets, although currently we have no specific agreements, commitments or understandings in this regard. 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 closing of this offering or the amounts that we will actually spend on the uses set forth above. Predicting the cost necessary to develop product candidates can be difficult and we anticipate that we will need additional funds to complete the development of any product candidates we identify. The amounts and timing of our actual expenditures and the extent of clinical development may vary significantly depending on numerous factors, including the progress of our development efforts, the status of and results from pre-clinical studies and any ongoing clinical trials or clinical trials we may commence in the future, as well as any collaborations that we may enter into with third parties for our product candidates and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

We believe that the net proceeds from this offering, together with our existing cash and cash equivalents, 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 incorrect, and we could use our available capital resources sooner than we currently expect. We may satisfy our future cash needs through the sale of equity securities, debt financings, working capital lines of credit, corporate collaborations or license agreements, grant funding, interest income earned on invested cash balances or a combination of one or more of these sources.

Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation investments, including short-term, investment-grade, interest-bearing instruments and U.S. government securities.

DIVIDEND POLICY

We currently intend to retain all available funds and any future earnings to fund the development, commercialization and growth of our business, and therefore we do not anticipate declaring or paying any cash dividends on any class of our common stock in the foreseeable future. Any future determination as to the declaration and payment of dividends, if any, will be at the discretion of our board of directors, subject to compliance with contractual restrictions and covenants in the agreements governing our current and future indebtedness. Any such determination will also depend upon our business prospects, results of operations, financial condition, cash requirements and availability and other factors that our board of directors may deem relevant.

Accordingly, you may need to sell your shares of our Class A common stock to realize a return on your investment, and you may not be able to sell your shares at or above the price you paid for them. See “Risk Factors—Risks Related to This Offering and Ownership of Our Class A Common Stock—We do not currently intend to pay dividends on our Class A common stock and, consequently, your ability to achieve a return on your investment will depend on appreciation of the value of our Class A common stock.”

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of March 31, 2021, as follows:

- on an actual basis;
- on a pro forma basis to give effect to (i) the receipt of approximately $24.8 million in aggregate net proceeds from the issuance and sale of Series B Preferred Stock that occurred in April and May 2021, (ii) the conversion of all outstanding shares of our Series A Preferred Stock and Series B Preferred Stock into an aggregate of shares of our common stock, as if such conversion had occurred on March 31, 2021, and (iii) the filing and effectiveness of our amended and restated certificate of incorporation upon the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to our issuance and sale of shares of Class A common stock in this offering at an assumed initial public offering price of $ per share (which is the midpoint of the price range set forth on the cover of this prospectus), after deducting the 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 closing of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this information in conjunction with our consolidated financial statements and the related notes included elsewhere in this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections and other financial information contained in this prospectus.

	As of March 31, 2021		
	Actual	Pro Forma	Pro Forma As Adjusted[1]
	(in thousands, except share and per share amounts)		
Cash and cash equivalents	$ 30,934	$	$
Convertible preferred stock, par value $0.001 per share: 8,528,116 shares authorized, 6,115,225 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	$ 58,104	$	$
Stockholders' (deficit) equity			
Class A common stock, $0.001 par value per share: 15,733,000 shares authorized, 3,535,811 shares issued and outstanding, actual; shares authorized, shares issued and outstanding, pro forma; shares authorized, shares issued and outstanding, pro forma as adjusted	4		
Class B common stock, $0.001 par value per share: 6,032,183 shares authorized, no shares issued and outstanding, actual; shares authorized, no shares issued and outstanding, pro forma; shares authorized, no shares issued and outstanding, pro forma as adjusted	–		
Preferred stock, $0.001 par value per share: shares authorized, issued and outstanding, actual; shares authorized, pro forma and pro forma as adjusted; no shares issued and outstanding, pro forma and pro forma as adjusted	–		
Additional paid-in capital	3,434		
Accumulated deficit	(31,967)		
Total stockholders' equity (deficit)	(28,529)		
Total capitalization	$ 29,575	$	$

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, total stockholders' equity and total capitalization by $ million, 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million shares in the number of shares offered by us at the assumed initial public offering price per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, total stockholders' equity and total capitalization by approximately $ million.

The number of shares of our Class A common stock on a pro forma and pro forma as adjusted basis set forth in the table above is based on shares of our Class A common stock outstanding as of March 31, 2021, and excludes:

- additional shares of Class A common stock reserved for future issuance under the 2021 Plan, which will become effective in connection with this offering, as well as any automatic increases in the number of shares of our Class A common stock reserved for future issuance under the 2021 Plan;
- shares of Class A common stock that will become available for future issuance under the ESPP, which will become effective in connection with this offering, and shares of our common stock that become available pursuant to provisions in the ESPP that automatically increase the share reserve under the ESPP;
- shares of Class A common stock issuable upon exercise of outstanding stock options granted under the 2015 Plan, as of March 31, 2021, at a weighted average exercise price of $ per share; and
- shares of Class A common stock available for future issuance under the 2015 Plan as of March 31, 2021.

DILUTION

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

Our historical net tangible book value (deficit) as of March 31, 2021 was $(29.1) million, or $(8.23) per share of our Class A common stock. Our historical net tangible book value (deficit) is the amount of our total tangible assets less our total liabilities and preferred stock, which is not included within stockholders' equity (deficit). Historical net tangible book value (deficit) per share represents historical net tangible book value (deficit) divided by the 3,535,811 shares of our Class A common stock outstanding as of March 31, 2021.

Our pro forma net tangible book value (deficit) as of March 31, 2021 was $ million, or $ per share of our Class A common stock. Pro forma net tangible book value per share is determined by subtracting our total liabilities from the total book value of our tangible assets and dividing the difference by the number of shares of Class A common stock deemed to be outstanding, after giving effect to (i) the receipt of approximately $24.8 million in net proceeds from the issuance and sale of Series B Preferred Stock that occurred in April and May 2021, and (ii) the conversion of all outstanding shares of our preferred stock into an aggregate of shares of Class A common stock as if such conversion had occurred on March 31, 2021, subject to certain beneficial ownership limitations.

After giving further effect to our issuance and sale of shares of our Class A common stock in this offering at an assumed initial public offering price of $ per share (which is 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, our pro forma as adjusted net tangible book value as of March 31, 2021, would have been $ million, or $ per share of Class A common stock. This amount represents an immediate increase in pro forma as adjusted net tangible book value of $ per share to our existing stockholders and an immediate dilution in pro forma as adjusted net tangible book value of $ per share to new investors purchasing shares of Class A common stock in this offering. We determine dilution by subtracting the pro forma as adjusted net tangible book value per share after this offering from the amount of cash that a new investor paid for a share of Class A common stock.

The following table illustrates this dilution:

Assumed initial public offering price per share of Class A common stock		$
Historical net tangible book value (deficit) per share as of March 31, 2021	$	
Increase per share attributable to the conversion of outstanding preferred stock		
Pro forma net tangible book value per share as of March 31, 2021 before this offering	$	
Increase in pro forma as adjusted net tangible book value per share attributable to investors in this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to new Class A common stock investors in this offering		$

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share (which is the midpoint of the price range listed on the cover page of this prospectus) would increase (decrease) the pro forma as adjusted net tangible book value per share after this offering by approximately $, and dilution in pro forma as adjusted net tangible book value per share to new investors 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their option to purchase additional shares of our Class A 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 as adjusted net tangible book value per share to existing stockholders would be $ per share and the dilution in pro forma as adjusted net tangible book value 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 price range listed on the cover page of this prospectus.

The following table summarizes, as of March 31, 2021, after giving effect to this offering, the number of shares of our Class A common stock purchased from us, the total consideration paid, or to be paid, to us and the average price per share paid, or to be paid, by existing stockholders and by the new investors. The calculation below is based on an assumed initial public offering price of $ per share, which is the midpoint of the price range listed on the cover page of this prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average price per share
	Number	Percent	Amount	Percent	
Existing stockholders[(1)]		%	$	%	$
New investors					
Total		**100%**	**$**	**100%**	**$**

(1) The presentation in this table regarding ownership by existing stockholders does not give effect to any purchases that existing stockholders may make through our directed share program or otherwise purchase in this offering.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the total consideration paid by new investors and the total consideration paid by all stockholders by $ million, assuming the number of shares offered by us remains the same and after deducting estimated underwriting discounts and commissions but before estimated offering expenses.

Except as otherwise indicated, the discussion and the tables above assume no exercise of the underwriters' option to purchase additional shares of our Class A common stock and excludes:

- additional shares of our Class A common stock reserved for future issuance under the 2021 Plan, which will become effective in connection with this offering, as well as any automatic increases in the number of shares of our Class A common stock reserved for future issuance under the 2021 Plan;
- shares of Class A common stock that will become available for future issuance under the ESPP, which will become effective in connection with this offering, and shares of our Class A common stock that become available pursuant to provisions in the ESPP that automatically increase the share reserve under the ESPP;
- shares of Class A common stock issuable upon exercise of outstanding stock options granted under the 2015 Plan as of March 31, 2021, at a weighted average exercise price of $ per share;
- shares of Class A common stock available for future issuance under the 2015 Plan as of March 31, 2021.

To the extent any of these outstanding options are exercised, there will be further dilution to new investors. To the extent all of such outstanding options had been exercised as of March 31, 2021, the pro forma as adjusted net tangible book value per share after this offering would be $, and total dilution per share to new investors would be $.

If the underwriters exercise their option to purchase additional shares of our common stock in full:

- the percentage of shares of our Class A common stock held by the existing stockholders will decrease to approximately % of the total number of shares of our Class A common stock outstanding after this offering; and
- the number of shares of our Class A common stock held by new investors will increase to , or approximately % of the total number of shares of our Class A common stock outstanding after this offering.

SELECTED CONSOLIDATED FINANCIAL DATA

The following tables set forth our selected financial data for the periods indicated. We have derived the summary consolidated statements of operations data for the three months ended March 31, 2021 and 2020 and the summary consolidated balance sheet data as of March 31, 2021 from our unaudited interim condensed consolidated financial statements included elsewhere in this prospectus. We have derived the consolidated statements of operations data for the years ended December 31, 2020 and 2019, and the consolidated balance sheet data as of December 31, 2020 and 2019, from our audited consolidated financial statements included elsewhere in this prospectus. We have prepared the unaudited interim condensed consolidated financial statements on a basis substantially consistent with our audited consolidated financial statements as of and for the year ended December 31, 2020, and the unaudited interim condensed consolidated financial statements include all normal recurring adjustments necessary for a fair statement of the financial information set forth in those unaudited interim condensed consolidated financial statements. Our historical results are not necessarily indicative of the results that should be expected for any future period. You should read the following selected consolidated financial data together with our consolidated financial statements and the related notes included elsewhere in this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this prospectus. Our historical results for any prior period are not necessarily indicative of our future results, and our operating results for the three-month period ended March 31, 2021 are not necessarily indicative of the results that may be expected for the year ending December 31, 2021 or any other interim periods or any future year or period.

	Three Months Ended March 31,		Year Ended December 31,	
	2021	2020	2020	2019
	(in thousands, except share and per share amounts)			
Consolidated Statements of Operations Data:				
Revenue	$ 748	$ 483	$ 2,311	$ 1,920
Cost of revenue	409	255	1,280	1,223
Gross profit	339	228	1,031	697
Operating expenses				
Research and development	5,391	2,823	15,004	4,279
General and administrative	1,184	644	3,110	2,709
Total operating expenses	6,575	3,467	18,114	6,988
Loss from operations	(6,236)	(3,239)	(17,083)	(6,291)
Other income (expense), net				
Interest income (expense), net	6	38	43	(293)
Loss on conversion of convertible notes	—	—	—	(1,125)
Net loss	$ (6,230)	$ (3,201)	$ (17,040)	$ (7,709)
Net loss per share attributable to common stockholders, basic and diluted	$ (1.76)	$ (0.91)	$ (4.82)	$ (2.18)
Weighted-average common shares outstanding used to compute net loss per share, basic and diluted[1][2]	3,535,811	3,535,811	3,535,811	3,535,811
Pro Forma net loss per share attributable to common shareholders, basic and diluted[3]	$ (0.65)		$ (2.78)	
Pro Forma weighted average shares outstanding used to compute pro forma net loss per share, basic and diluted[3]	9,651,036		6,127,858	

(1) See Note 7 to our unaudited interim consolidated financial statements for the three months ended March 31, 2021 and 2020 appearing at the end of this prospectus for further details on the calculation of basic and diluted net loss per share attributable to common stockholders.

(2) See Note 8 to our consolidated financial statements for the years ended December 31, 2020 and 2019 appearing at the end of this prospectus for further details on the calculation of basic and diluted net loss per share attributable to common stockholders.

(3) The unaudited pro forma net loss per share for the three months ended March 31, 2021 and for the year ended December 31, 2020 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all outstanding shares of Series A Preferred Stock and Series B Preferred Stock into shares of common stock, as if such conversion had occurred at the beginning of the period, or their issuance dates, if later. The information presented in this table does not give effect to the sale and issuance of our Series B Preferred Stock that occurred in April and May 2021.

	As of March 31, 2021	As of December 31, 2020	2019
	(in thousands)		
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 30,934	$ 37,090	$13,782
Working capital[(1)]	29,425	35,475	13,558
Total assets	32,857	38,423	14,099
Total liabilities	3,282	2,801	4,015
Convertible preferred stock	58,104	58,104	16,612
Accumulated deficit	(31,967)	(25,738)	(8,698)
Total stockholders' equity (deficit)	(28,529)	(22,481)	(6,528)

(1) We define working capital as current assets less current liabilities.

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 together with the section entitled "Selected Consolidated Financial Data" and our consolidated financial statements and the related notes appearing at the end of this prospectus. Some of the information contained in this discussion and analysis or set forth at the end of this prospectus, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the section entitled "Risk Factors," our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis. You should carefully read the section entitled "Risk Factors" to gain an understanding of the important factors that could cause actual results to differ materially from our forward- looking statements. Please also see the section entitled "Cautionary Note Regarding Forward-Looking Statements."

Overview

We are a biopharmaceutical company with an emerging pipeline focused on improving patient outcomes across a spectrum of debilitating oncologic and neurologic diseases by applying our deep knowledge of translational bioinformatics to every stage of the drug development process. We have more than a decade of experience in translational bioinformatics and generating insights into drug mechanisms of action and patient treatment responses. Building on this experience, we developed a disease-agnostic platform that enables us to utilize human data, novel biology and chemistry, and translational planning to create and advance our wholly owned pipeline. Our current development programs in oncology are focused on providing treatments for patients with solid tumors caused by mutations of the RAS/RAF/MEK/ERK pathway and other oncologic signaling pathways. Our lead product candidate, IMM-1-104, is designed to be a highly selective dual-MEK inhibitor that further disrupts the kinase suppressor of RAS 1 and 2 for the treatment of advanced solid tumors in patients harboring RAS mutant tumors. We plan to submit an Investigational New Drug, or IND, for IMM-1-104 to the U.S. Food and Drug Administration, or the FDA, in the first quarter of 2022. In addition, we anticipate filing at least two additional INDs for our other oncology programs, one in each of 2023 and 2024.

For the period from inception through 2017, we devoted substantially all of our efforts to business planning, service revenue generation, developing tools to aid in drug discovery, and recruiting management and technical staff. Since 2018, we have also focused significant effort on our own internal research and development programs. We have financed our operations through service revenues, the issuance of convertible debt and the sale of convertible preferred stock and common stock.

Our operations have been financed primarily by service revenues and aggregate net proceeds of approximately $81.4 million from the issuance of convertible notes payable, convertible preferred stock including gross proceeds of approximately $24.8 million from the issuance of shares in the second tranche of Series B Preferred in April and May 2021, common stock and the exercise of stock options. Since inception, we have had significant annual operating losses. Our net loss was approximately $6.2 million, $3.2 million, $17.0 million and $7.7 million for the three months ended March 31, 2021 and 2020 and the years ended December 31, 2020 and 2019, respectively. As of March 31, 2021, we had an accumulated deficit of approximately $32.0 million and approximately $30.9 million in cash and cash equivalents.

Cash used to fund operating expenses is impacted by the timing of when we pay these expenses, as reflected in the change in our accounts payable and accrued expenses. We expect to continue to incur net losses for the foreseeable future, and we expect our research and development expenses, general and administrative expenses, and capital expenditures will continue to increase. In particular, we expect our expenses to increase as we continue our development of, and seek regulatory approvals for, our internally developed product candidates, as well as hire additional personnel, pay fees to outside consultants, lawyers and accountants, and incur other increased costs associated with being a public company. In addition, if and when we seek and obtain regulatory approval to commercialize any product candidate, we will also incur increased expenses in connection with commercialization and marketing of any such product. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our clinical trials and our expenditures on other research and development activities.

Based upon our current business plans, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents will be sufficient to fund our development activities and other operations through December 31, 2023. 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. To finance our operations beyond that point we will need to raise additional capital, which cannot be assured.

We have not had any internally developed products approved for sale. We do not expect to generate any product sales unless and until we successfully complete development and obtain regulatory approval for one or more of our internally developed product candidates. If we obtain regulatory approval for any of our internally developed product candidates, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution. As a result, until such time, if ever, that we can generate substantial product revenue, we expect to finance our cash needs through service revenue, equity offerings, debt financings or other capital sources, including collaborations, licenses or similar arrangements. However, we may be unable to raise additional funds or enter into such other arrangements when needed or on favorable terms, if at all. Any failure to raise capital as and when needed could have a negative impact on our financial condition and on our ability to pursue our business plans and strategies, including our research and development activities. If we are unable to raise capital, we will need to delay, reduce or terminate planned activities to reduce costs.

In March 2020, the World Health Organization declared the COVID-19 outbreak a pandemic. In particular, the ongoing COVID-19 pandemic has resulted in federal, state and local governments and private entities mandating various restrictions, including travel restrictions, access restrictions, restrictions on public gatherings, and stay at home orders. The effect of these orders, government imposed quarantines and measures we have taken, such as implementing work-at-home policies, may negatively impact productivity, disrupt our business and/or could adversely affect our development plans and results. We cannot presently predict the scope and severity of any potential business shutdowns or disruptions, but if we or any of the third parties with whom we engage, including personnel at third-party manufacturing facilities and other third parties with whom we conduct business, were to experience shutdowns or other business disruptions, our ability to conduct our business in the manner and on the timeline presently planned could be materially and adversely impacted. It is unknown how long these conditions will last and what the complete effect will be on us. While to date we have been able to continue to execute our overall business plan, some of our business activities have been slowed and taken longer to complete, particularly with respect to our process for recruiting new employees, and we continue to adjust to the challenges of operating in a largely remote setting with our employees. Overall, we recognize the challenges the pandemic may pose to our business, will continue to closely monitor events as they develop and plan for alternative and mitigating measures that we can implement if needed.

Components of Our Results of Operations

Revenue

Our revenue is generated by providing computational biology professional services to pharmaceutical and biotechnology companies. We charge an agreed upon rate per hour based on the aggregate level of personnel assigned to work on the project or a fixed fee for a defined scope of work. Our contracts specify the period of time over which these professional services will be provided. We recognize revenue over time by measuring the progress toward complete satisfaction of the performance obligation using a single method of measuring progress, which depicts the performance in transferring control of the associated services to the customer. We use input methods to measure the progress toward the complete satisfaction of performance obligations and evaluate the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenue and net loss in the period of adjustment.

We expect revenue to remain similar to prior years in the near-term as we continue to provide services to our existing customers and these revenues could decrease as we have deprioritized new services work in order to focus on developing our wholly owned pipeline.

Cost of Revenue

Our cost of revenue expenses consists primarily of costs related to providing professional services to our customers. These costs include salaries, bonuses, benefits, and equity-based compensation expense, depreciation, facilities, and other outside services.

Operating Expenses

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

Research and Development

Research and development expenses account for a significant portion of our operating expenses. Our research and development expenses consist primarily of direct and indirect costs incurred in connection with the development of our research platform, product candidates, discovery efforts and preclinical studies related to our program pipeline.

Our direct costs include:

- expenses incurred under agreements with CROs and other vendors that conduct our preclinical activities on our behalf; including laboratory expenses related to the execution of preclinical studies that conduct research and development activities on our behalf;
- expenses associated with the manufacturing of our product candidates and preclinical material, including fees paid to contract manufacturers; and
- consulting fees and expenses related to preparation of initiation of clinical trials

Our indirect costs include:

- personnel-related expenses, consisting of employee salaries, bonuses, benefits and equity-based compensation expense and recruiting costs for personnel engaged in research and development activities; and
- facility and equipment related expenses, consisting of indirect and allocated expenses for rent, depreciation, maintenance of facilities, insurance, and other supplies.

We expense research and development costs as incurred. Our direct research and development expenses are not currently tracked on a program-by-program basis, but we anticipate tracking costs on a program-by-program basis at the time IMM-1-104 enters clinical trials, which we expect to occur in the first half of 2022. We use our personnel and infrastructure resources across multiple research and development programs directed toward identifying and developing product candidates. Substantially all our research and development costs in the three months ended March 31, 2021 and 2020 and the years ended December 31, 2020 and 2019 was incurred on the development of IMM-1-104 and our other preclinical pipeline candidates. In the three months ended March 31, 2021 and 2020 and the years ended December 31, 2020 and 2019, we advanced several programs from discovery into preclinical development.

Due to the inherently unpredictable nature and numerous risks and uncertainties associated with product development and the current stage of development of our product candidates and programs, we cannot reasonably estimate or know the nature, timing and estimated costs necessary to complete the remainder of the development of our product candidates or programs. We are also unable to predict if, when, or to what extent we will obtain approval and generate revenues from the commercialization and sale of any of our product candidates.

The duration, costs and timing of preclinical studies and clinical trials and development of our product candidates will depend on a variety of factors, such as:

- successful completion of preclinical studies and initiation of clinical trials for future product candidates;
- successful enrollment and completion of clinical trials for our current product candidates;
- data from our clinical programs that support an acceptable risk-benefit profile of our product candidates in the intended patient populations;
- acceptance by the FDA or other applicable regulatory agencies of IND applications, clinical trial applications and/or other regulatory filings for our product candidates;
- expansion and maintenance of a workforce of experienced scientists and others to continue to develop our product candidates;

- successful application for and receipt of marketing approvals from applicable regulatory authorities;
- obtainment and maintenance of intellectual property protection and regulatory exclusivity for our product candidates;
- making of arrangements with contract manufacturing organizations for, or establishment of, commercial manufacturing capabilities;
- establishment of sales, marketing and distribution capabilities and successful launch of commercial sales of our product candidates, if and when approved, whether alone or in collaboration with others;
- acceptance of our product candidates, if and when approved, by patients, the medical community and third-party payors;
- effective competition with other therapies;
- obtainment and maintenance of coverage, adequate pricing and adequate reimbursement from third-party payors, including government payors;
- maintenance, enforcement, defense and protection of our rights in our intellectual property portfolio;
- avoidance of infringement, misappropriation or other violations with respect to others' intellectual property or proprietary rights; and
- maintenance of a continued acceptable safety profile of our products following receipt of any marketing approvals.

A change in the outcome of any of these variables with respect to the development of any of our product candidates could significantly change the costs and timing associated with the development of that product candidate.

The process of conducting the necessary preclinical and clinical research to obtain regulatory approval is costly and time-consuming. The actual probability of success for our product candidates may be affected by a variety of factors. We may never succeed in achieving regulatory approval for any of our product candidates. Further, a number of factors, including those outside of our control, could adversely impact the timing and duration of our product candidates' development, which could increase our research and development expense. We may obtain unexpected results from our preclinical studies and clinical trials. We may elect to discontinue, delay or modify clinical trials of some product candidates or focus on others. A change in the outcome of any of these factors could mean a significant change in the costs and timing associated with the development of our current and future preclinical and clinical product candidates. For example, if the FDA or another regulatory authority were to require us to conduct clinical trials beyond those that we currently anticipate will be required for the completion of clinical development, or if we experience significant delays in execution of or enrollment in any of our preclinical studies or clinical trials, we could be required to expend significant additional financial resources and time on the completion of preclinical and clinical development.

We expect that our research and development expenses will substantially increase for the foreseeable future as we continue to implement our business strategy, which includes advancing our product candidates through clinical development, expanding our research and development efforts, including hiring additional personnel to support our research and development efforts, and seeking regulatory approvals for our product candidates that successfully complete clinical trials. In addition, product candidates in later stages of clinical development generally incur higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. As a result, we expect our research and development expenses to increase as our product candidates advance into later stages of clinical development. As of the date of this prospectus, we cannot reasonably determine or accurately project total program-specific expenses through commercialization. There are numerous factors associated with the successful commercialization of any of our product candidates, including future trial design and various regulatory requirements, many of which cannot be determined with accuracy at this time based on our stage of development.

General and Administrative

Our general and administrative expenses consist primarily of personnel-related expenses, including employee salaries, bonuses, benefits, equity-based compensation, and recruiting costs for personnel in executive, finance,

and other administrative functions. Other significant general and administrative expenses include legal fees relating to intellectual property and corporate matters, professional fees for accounting, tax and consulting services, insurance costs, travel expenses and facility related expenses not otherwise included in research and development expenses.

We expect our general and administrative expenses will substantially increase for the foreseeable future as we continue to increase our general and administrative headcount to support our continued research and development activities and, if any product candidates receive marketing approval, commercialization activities, as well as to support our operations generally. As we expand our operations, we also expect to incur increased expenses associated with operating as a public company, including costs related to accounting, audit, legal, regulatory, and tax-related services associated with maintaining compliance with exchange listing and rules and regulations of the SEC, Sarbanes-Oxley Act, director and officer insurance costs, and investor and public relations costs.

Other Income (Expense), Net

Other income (expense), net consists primarily of interest income earned on our cash and cash equivalents carried at fair value, and interest expense related to the conversion of notes payable and a loss on the extinguishment of the convertible note.

Results of Operations

Comparison of the Three Months Ended March 31, 2021 and 2020

The following table summarizes our results of operations for the periods indicated:

	Three Months Ended March 31,		Change	
	2021	2020	$	%
	(in thousands, except percentages)			
Revenue	$ 748	$ 483	$ 265	54.9%
Cost of revenue	409	255	154	60.4%
Gross profit	339	228	111	48.7%
Operating expenses:				
Research and development	5,391	2,823	2,568	91.0%
General and administrative	1,184	644	540	83.9%
Total operating expenses	6,575	3,467	3,108	89.6%
Loss from operations	(6,236)	(3,239)	(2,997)	(92.5)%
Other income:				
Interest income	6	38	(32)	(84.2)%
Net loss	$(6,230)	$(3,201)	$(3,029)	94.6%

Revenue

The following table summarizes the revenue recognized for the periods indicated:

	Three Months Ended March 31,		Change	
	2021	2020	$	%
	(in thousands, except percentages)			
Revenue	$748	$483	$265	54.9%

Revenue increased by approximately $0.3 million, or 54.9%, to approximately $0.7 million for the three months ended March 31, 2021 compared to approximately $0.5 million for the three months ended March 31, 2020.

The increase in revenue was due to an increase by approximately $0.4 million from new customers in 2021, partially offset by approximately $0.1 million decrease due to customer agreements that were completed in 2020.

Cost of Revenue

The following table summarizes the components of cost of revenue expenses for the periods indicated:

	Three Months Ended March 31,		Change	
	2021	2020	$	%
	(in thousands, except percentages)			
Employee related costs	$370	$211	$159	75.4%
Equity-based compensation expense	23	25	(2)	(8.0)%
Facilities and other allocated expenses	14	18	(4)	(22.2)%
Depreciation	2	1	1	100.0%
Total cost of revenue	$409	$255	$154	60.4%

Cost of revenue increased by approximately $0.1 million, or 60.4%, to approximately $0.4 million for the three months ended March 31, 2021 compared to approximately $0.3 million for the three months March 31, 2020. The increase was primarily due to increased employee related costs of approximately $0.2 million, partially offset by a decrease in equity-based compensation and facilities.

Research and Development

The following table summarizes the components of our research and development expenses for the periods indicated:

	Three Months Ended March 31,		Change	
	2021	2020	$	%
	(in thousands, except percentages)			
Employee related costs	$1,759	$1,090	$ 669	61.4%
Equity-based compensation expense	106	116	(10)	(8.6)%
Outside contract research services	3,414	1,529	1,885	123.3%
Facilities and other allocated expenses	105	84	21	25.0%
Depreciation	7	4	3	75.0%
Total research and development	$5,391	$2,823	$2,568	91.0%

Research and development expenses increased by approximately $2.6 million, or 91.0%, to approximately $5.4 million for the three months ended March 31, 2021 as compared to approximately $2.8 million for the three months ended March 31, 2020. The increase of approximately $2.6 million was primarily due to approximately $1.9 million of outside contract research services for our preclinical candidates due to an increased number of discovery programs and increased spending on later stage preclinical efforts. The increase also includes approximately $0.7 million of additional employee related costs, primarily due to an increase in headcount.

General and Administrative

The following table summarizes the components of our general and administrative expenses for the periods indicated:

	Three Months Ended March 31,		Change	
	2021	2020	$	%
	(in thousands, except percentages)			
Employee related costs	$ 569	$273	$296	108.4%
Equity-based compensation expense	54	131	(77)	(58.8)%
Professional fees	442	158	284	179.7%
Public relations	98	64	34	53.1%
Outside consultants	3	4	(1)	(25.0)%
Facilities and other allocated expenses	9	10	(1)	(10.0)%
Other	9	4	5	125.0%
Total general and administrative	$1,184	$644	$540	83.9%

General and administrative expenses increased by approximately $0.5 million, or 83.9%, to approximately $1.2 million for the three months ended March 31, 2021 compared to approximately $0.6 million for the three months ended March 31, 2020. The increase of approximately $0.5 million was primarily due to increased employee related costs of approximately $0.3 million, increased professional fees incurred for accounting, auditing, legal, and tax services of approximately $0.3 million, partially offset by a decrease of approximately $0.1 million for equity-based compensation expense due to a grant that was fully vested in 2020.

Other Income, Net

Other income decreased by approximately $32,000, or 84.2% due to a decrease in interest rates earned from our cash and cash equivalents balances due to changes in interest rates.

Comparison of the Years Ended December 31, 2020 and 2019

The following table summarizes our results of operations for the periods indicated:

	Year Ended December 31,		Change	
	2020	2019	$	%
	(in thousands, except percentages)			
Revenue	$ 2,311	$ 1,920	$ 391	20.4%
Cost of revenue	1,280	1,223	57	4.7%
Gross profit	1,031	697	334	47.9%
Operating expenses:				
Research and development	15,004	4,279	10,725	250.6%
General and administrative	3,110	2,709	401	14.8%
Total operating expenses	18,114	6,988	11,126	159.2%
Loss from operations	(17,083)	(6,291)	(10,792)	171.5%
Other income (expense):				
Interest income (expense), net	43	(293)	336	(114.7)%
Loss on conversion of convertible note	—	(1,125)	1,125	100.0%
Net loss	$(17,040)	$(7,709)	$ (9,331)	121.0%

Revenue

The following table summarizes the revenue recognized for the periods indicated:

	Year Ended December 31,		Change	
	2020	2019	$	%
	(in thousands, except percentages)			
Revenue	$2,311	$1,920	$391	20.4%

Revenue increased by approximately $0.4 million, or 20.4%, to approximately $2.3 million for the year ended December 31, 2020 compared to approximately $1.9 million for the year ended December 31, 2019. The increase in revenue was due to an increase by approximately $0.1 million, or 7%, growth from existing customers, approximately $1.2 million from new customers during 2020 partially offset by approximately $1.0 million decrease due to customer agreements that were completed in 2019.

Costs of Revenue

The following table summarizes the components of cost of revenue expenses for the periods indicated:

	Year Ended December 31,		Change	
	2020	2019	$	%
	(in thousands, except percentages)			
Employee related costs	$1,087	$ 906	$181	20.0%
Equity-based compensation expense	108	167	(59)	(35.3)%
Outside contract research services	6	20	(14)	(70.0)%
Facilities and other allocated expenses	74	124	(50)	(40.3)%
Depreciation	5	6	(1)	(16.7)%
Total cost of revenue	$1,280	$1,223	$ 57	4.7%

Cost of revenue increased by approximately $0.1 million, or 4.7%, to approximately $1.3 million for the year ended December 31, 2020 compared to approximately $1.2 million for the year ended December 31, 2019. The increase was primarily due to increased employee related costs of approximately $0.2 million, offset by decreases in equity-based compensation, facilities, depreciation, and outside contract research services.

Research and Development

The following table summarizes the components of research and development expenses for the periods indicated:

	Year Ended December 31,		Change	
	2020	2019	$	%
	(in thousands, except percentages)			
Employee related costs	$ 5,505	$1,801	$ 3,704	205.7%
Equity-based compensation expense	503	306	197	64.4%
Outside contract research services	8,646	1,938	6,708	346.1%
Facilities and other allocated expenses	330	222	108	48.6%
Depreciation	20	12	8	66.7%
Total research and development	$15,004	$4,279	$10,725	250.6%

Research and development expenses increased by approximately $10.7 million, or 250.6%, to approximately $15.0 million for the year ended December 31, 2020 as compared to approximately $4.3 million for the year ended December 31, 2019. The increase of approximately $10.7 million was primarily due to approximately $6.7 million of outside contract research services for our preclinical candidates due to an increased number of

discovery programs and increased spending on later stage preclinical efforts. The increase also includes approximately $3.7 million of additional employee related costs, primarily due to higher headcount and increased equity-based compensation of approximately $0.2 million.

General and Administrative

The following table summarizes the components of general and administrative expenses for the periods indicated:

	Year Ended December 31,		Change	
	2020	2019	$	%
	(in thousands, except percentages)			
Employee related costs	$1,426	$1,102	$ 324	29.4%
Equity-based compensation expense	476	863	(387)	(44.8)%
Professional fees	836	470	366	77.9%
Public relations	289	19	270	1,421.1%
Outside consultants	18	201	(183)	(91.0)%
Facilities and other allocated expenses	38	34	4	11.8%
Other	27	20	7	35.0%
Total general and administrative	$3,110	$2,709	$ 401	14.8%

General and administrative expenses increased by approximately $0.4 million, or 14.8%, to approximately $3.1 million for the year ended December 31, 2020 compared to approximately $2.7 million for the year ended December 31, 2019. The increase of approximately $0.4 million was primarily due to increased employee related costs of approximately $0.3 million, increased professional fees incurred for accounting, auditing, legal, and tax services of approximately $0.4 million, increased public relation costs of approximately $0.3 million, partially offset by a decrease of approximately $0.4 million for equity-based compensation expense due to the fair value of warrants issued to several advisors in 2019 and a decrease of approximately $0.2 million for outside consultants.

Other Income (Expense), Net

The following table summarizes the components of other income (expense) for the periods indicated:

	Year Ended December 31,		Change	
	2020	2019	$	%
	(in thousands, except percentages)			
Interest income	$43	$ 58	$ (15)	(25.9)%
Interest expense	—	(351)	351	100.0%
Loss on conversion of convertible notes	—	(1,125)	1,125	100.0%
Other income (expense), net	$43	$(4,418)	$1,461	103.0%

Other income (expense) increased by approximately $1.5 million, or 103.0%, with other income of approximately $43,000 for the year ended December 31, 2020 compared to other expense of approximately $1.4 million for the year ended December 31, 2019. The increase was primarily due to approximately $1.1 million loss on the conversion of convertible notes and approximately $0.4 million non-cash interest expense related to the convertible notes in 2019, partially offset by a decrease in interest income earned from our cash equivalents balances.

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have financed our operations through service revenues, the issuance of convertible notes payable, convertible preferred stock, common stock, and the exercise of stock options. As of March 31,

2021, we had an accumulated deficit of approximately $32.0 million and approximately $30.9 million in cash and cash equivalents. Cash and cash equivalents are comprised of deposits at major financial banking institutions and highly liquid investments with an original maturity of three months or less at the date of purchase. Our primary use of cash is to fund operating expenses, which consist primarily of research and development expenditures, and to a lesser extent, general and administrative expenditures. Cash used to fund operating expenses is impacted by the timing of when we pay these expenses, reflected in the change in our outstanding accounts payable and accrued expenses.

We expect to incur substantial expenditures in the foreseeable future for the development of our product candidates and will require additional financing to continue this development. The consolidated financial statements appearing elsewhere in this prospectus have been prepared on a basis that assumes that we will continue as a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business.

Cash Flows

The following table summarizes our sources and uses of cash for the periods indicated:

	Three Months Ended March 31,		Years Ended December 31,	
	2021	2020	2020	2019
	(in thousands)			
Net cash (used in) provided by:				
Operating activities	$(6,140)	$(2,314)	$(14,621)	$ (4,442)
Investing activities	(16)	(4)	(53)	(21)
Financing activities	—	998	37,982	17,171
Net decrease in cash and cash equivalents	$(6,156)	$(1,320)	$ 23,308	$12,708

Net Cash Used in Operating Activities

During the three months ended March 31, 2021, operating activities used approximately $6.1 million of cash, primarily resulting from our net loss of approximately $6.2 million and cash used by changes in our operating assets and liabilities of approximately $0.1 million, partially offset by equity-based compensation expense of approximately $0.2 million.

During the three months ended March 31, 2020, operating activities used approximately $2.3 million of cash, primarily resulting from our net loss of approximately $3.2 million, partially offset by equity-based compensation expense of approximately $0.3 million and cash provided by changes in our operating assets and liabilities of approximately $0.6 million.

During the year ended December 31, 2020, operating activities used approximately $14.6 million of cash, primarily resulting from our net loss of approximately $17.0 million, partially offset by equity-based compensation expense of approximately $1.1 million and cash provided by changes in our operating assets and liabilities of approximately $1.3 million.

During the year ended December 31, 2019, operating activities used approximately $4.4 million of cash, primarily resulting from our net loss of approximately $7.7 million, partially offset by equity-based compensation expense of approximately $0.6 million, non-cash warrant expense of approximately $0.7 million, non-cash interest expense on the convertible notes payable of approximately $0.4 million, and loss of approximately $1.1 million on the conversion of convertible notes payable and cash provided by changes in our operating assets and liabilities of approximately $0.4 million.

Net Cash Used in Investing Activities

During the three months ended March 31, 2021 and 2020, and the years ended December 31, 2020 and 2019, investing activities used approximately $16,000, $4,000, $53,000 and $21,000, respectively, for the purchase of property and equipment.

Net Cash Provided by Financing Activities

During the three months ended March 31, 2021, there was no net cash provided by financing activities.

During the three months ended March 31, 2020, net cash provided by financing activities was approximately $1.0 million, consisting primarily of proceeds received from the issuance of Series A preferred stock, net of issuance costs.

During the year ended December 31, 2020, net cash provided by financing activities was approximately $38.0 million, consisting primarily of approximately $37.0 million in net proceeds received from the issuance of Series B preferred stock and approximately $1.0 million in net proceeds from the issuance of Series A preferred stock.

During the year ended December 31, 2019, net cash provided by financing activities was approximately $17.2 million, consisting primarily of approximately $13.4 million in net proceeds received from the issuance of Series A preferred stock and approximately $3.8 million in proceeds, net of debt issuance costs, received from the issuance of convertible notes payable.

Future Funding Requirements

Any product candidates we may develop may never achieve commercialization, and we anticipate that we will continue to incur losses for the foreseeable future. Based on our current operating plan, we expect that our research and development expenses, general and administrative expenses, and capital expenditures will continue to increase. As a result, until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of service revenue, equity offerings, debt financings or other capital sources, including potential collaborations, licenses and other similar arrangements. Our primary uses of capital are, and we expect will continue to be, costs related to clinical research, manufacturing and development services; compensation and related expenses; costs relating to our headquarters and other offices and or laboratories; license payments or milestone obligations that may arise; laboratory expenses and costs for related supplies; manufacturing costs; legal and other regulatory expenses and general overhead costs.

Based upon our current operating plan, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents of approximately $30.9 million as of March 31, 2021 and approximately $24.8 million from the sale and issuance of shares in the second tranche of our Series B Preferred Stock in April and May 2021 will be sufficient to continue funding our development activities through December 31, 2023. To finance our operations beyond that point, we will need to raise additional capital, which cannot be assured. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect. We will continue to require additional financing to advance our current product candidates through clinical development, to develop, acquire or in-license other potential product candidates and to fund operations for the foreseeable future. We will continue to seek funds through equity offerings, debt financings or other capital sources, including potential collaborations, licenses and other similar arrangements. However, we may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all. If we do raise additional capital through public or private equity offerings, the ownership interest of our existing stockholders, including investors in this offering, will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. If we raise additional capital through debt financing, we 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. Any failure to raise capital as and when needed could have a negative impact on our financial condition and on our ability to pursue our business plans and strategies. If we are unable to raise capital, we will need to delay, reduce or terminate planned activities to reduce costs.

Because of the numerous risks and uncertainties associated with research, development, and commercialization of pharmaceutical products, we are unable to estimate the exact amount of our operating capital requirements. Our future funding requirements will depend on many factors, including, but not limited to:

- the impacts of the COVID-19 pandemic and potential future pandemics;

- the costs and results of our potential future clinical trials for our other product candidates;
- the scope, progress, results and costs of discovery research, preclinical development, laboratory testing and clinical trials for our other product candidates;
- the costs, timing and outcome of regulatory review of our product candidates;
- our ability to enter into contract manufacturing arrangements for supply of active pharmaceutical ingredient, or API, and manufacture of our product candidates and the terms of such arrangements;
- the payment or receipt of milestones and receipt of other collaboration-based revenues, if any;
- the costs and timing of any future commercialization activities, including product manufacturing, sales, marketing and distribution, for any of our product candidates for which we may receive marketing approval;
- the amount and timing of revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property and proprietary rights and defending any intellectual property related claims;
- the extent to which we acquire or in-license other products, product candidates, technologies or data referencing rights;
- our ability to establish and maintain strategic collaborations, licensing or other arrangements and the financial terms of such arrangements;
- our ability to access the private and public capital markets or to obtain financing at commercially reasonable rate;
- the ability to receive additional non-dilutive funding, including grants from organizations and foundations; and
- the costs of operating as a public company.

Further, our operating plans may change, and we may need additional funds to meet operational needs and capital requirements for clinical trials and other research and development activities. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated product development programs.

Contractual Obligations and Commitments

We enter into contracts in the normal course of business with third-party service providers for clinical trials, preclinical research studies and testing, manufacturing, leases and other services and products for operating purposes. We have not included our payment obligations under these contracts in the table as these contracts generally provide for termination upon notice, and therefore, we believe that our non-cancelable obligations under these agreements are not material and we cannot reasonably estimate the timing of if and when they will occur. As of March 31, 2021, we had commitments of approximately $0.7 million under our leases due within approximately 60 months.

We may also enter into additional research, manufacturing, supplier, lease and other agreements in the future, which may require up-front payments and even long-term commitments of cash.

Critical Accounting Policies and Use of Significant Judgments and Estimates

Our management’s discussion and analysis of our financial condition and results of operations is based on our condensed consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles, or GAAP. The preparation of these condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the condensed 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 value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Research and Development Costs

We will incur substantial expenses associated with manufacturing and clinical trials. Accounting for clinical trials relating to activities performed by contract research organizations, or CROs, and other external vendors requires management to exercise significant estimates in regard to the timing and accounting for these expenses. We estimate costs of research and development activities conducted by service providers, which include the conduct of sponsored research, preclinical studies and contract manufacturing activities. The diverse nature of services being provided under CROs and other arrangements, the different compensation arrangements that exist for each type of service and the lack of timely information related to certain clinical activities complicates the estimation of accruals for services rendered by CROs and other vendors in connection with clinical trials. Because payments of research and development activities do not always line up with the provision of such services, the balance sheet may reflect either an accrued or prepaid position. In estimating the duration of a clinical study, we evaluate the start-up, treatment and wrap up periods, compensation arrangements and services rendered attributable to each clinical trial and fluctuations are regularly tested against payment plans and trial completion assumptions.

We estimate these costs based on factors such as estimates of the work completed and budget provided and in accordance with agreements established with our collaboration partners and third-party service providers. We make significant judgments and estimates in determining the accrued liabilities and prepaid expense balances in each reporting period. As actual costs become known, we adjust our accrued liabilities or prepaid expenses. We have not experienced any material differences between accrued costs and actual costs incurred since our inception.

Our expenses related to clinical trials will be based on estimates of patient enrollment and related expenses at clinical investigator sites as well as estimates for the services received and efforts expended pursuant to contracts with multiple research institutions and CROs that may be used to conduct and manage clinical trials on our behalf. We will accrue expenses related to clinical trials based on contracted amounts applied to the level of patient enrollment and activity. If timelines or contracts are modified based upon changes in the clinical trial protocol or scope of work to be performed, we will modify our estimates of accrued expenses accordingly on a prospective basis.

Equity-based Compensation

Prior to this offering, we issued equity-based compensation awards through the granting of options, which generally vest over four years. We account for equity-based compensation in accordance with Accounting Standards Codification, or ASC, 718, Compensation — Stock Compensation, or ASC 718. In accordance with ASC 718, compensation cost is measured at estimated fair value at grant date and is included as compensation expense over the vesting period during which service is provided in exchange for the award.

We use the Black-Scholes option pricing model, or Black-Scholes, to determine fair value of our options. Black-Scholes includes various assumptions, including the fair value of common shares, expected life of incentive shares, the expected volatility and the expected risk-free interest rate. These assumptions reflect our best estimates, but they involve inherent uncertainties based on market conditions generally outside our control. As a result, if other assumptions had been used, equity-based compensation cost could have been materially impacted. Furthermore, if we use different assumptions for future grants, equity-based compensation cost could be materially impacted in future periods.

We granted stock options to purchase 159,910 shares of common stock during the three months ended March 31, 2021. The fair value of our awards in the three months ended March 31, 2021 has been estimated

using Black Scholes based on the following assumptions: term of 5.83 to 10 years; volatility of 69.0% to 81.0%; risk-free rate of 1.11% to 1.71%; and no expectation of dividends.

We granted stock options to purchase 204,100 shares of common stock during the three months ended March 31, 2020. The fair value of our awards in the three months ended March 31, 2020 has been estimated using Black Scholes based on the following assumptions: term of 6.01 years; volatility of 67.3%; risk-free rate of 1.21%; and no expectation of dividends.

We granted stock options to purchase 245,122 shares of common stock during the year ended December 31, 2020. The fair value of our awards in the year ended December 31, 2020 has been estimated using Black Scholes based on the following assumptions: term of 5.92 to 10 years; volatility of 67.3% to 80.85%; risk-free rate of 0.36% to 1.45%; and no expectation of dividends.

We granted stock options to purchase 714,496 shares of common stock in the year ended December 31, 2019. The fair value of our awards in the year ended December 31, 2019 has been estimated using Black Scholes based on the following assumptions: term of 6.08 years; volatility of 66.99% to 70.44%; risk-free rate of 1.77% to 2.20%; and no expectation of dividends.

We will continue to use judgment in evaluating the assumptions utilized for our equity-based compensation expense calculations on a prospective basis. In addition to the assumptions used in the Black-Scholes model, the amount of equity-based compensation expense we recognize in our consolidated financial statements includes incentive share forfeitures as they occurred.

As there has been no public market for our common shares to date, our board of directors, with input from management, has determined the estimated fair value of our common shares as of the date of each incentive share grant considering our then-most recently available third-party valuation of common shares. Valuations are updated when facts and circumstances indicate that the most recent valuation is no longer valid, such as changes in the stage of our development efforts, various exit strategies and their timing, and other scientific developments that could be related to the valuation of our company, or, at a minimum, annually. Third-party valuations were performed 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*.

The estimates of fair value of our common stock are highly complex and subjective. There are significant judgments and estimates inherent in the determination of the fair value of our common shares. These judgments and estimates include assumptions regarding our future operating performance, the time to completing an initial public offering, or IPO, or other liquidity event, the related valuations associated with these events, and the determinations of the appropriate valuation methods at each valuation date. The assumptions underlying these valuations represent our best estimates, which involve inherent uncertainties and the application of management judgment. If we had made different assumptions, our equity-based compensation expense, net loss and net loss per share applicable to common shareholders could have been materially different.

Following the completion of this offering, we intend to determine the fair value of our common stock based on the closing price of our common stock as reported by Nasdaq on the date of grant.

The following table details equity-based awards that we granted and awarded in the three months ended March 31, 2021 and 2020, and for the years ended December 31, 2020 and 2019:

Grant Date	Number of Shares Subject to Awards Granted	Per Share Exercise Price	Estimate of Common Share Fair Value Per Share on Grant Date	Black-Scholes Value Per Share on Grant Date
May 15, 2019	10,000	$4.72	$4.72	$3.02
December 16, 2019	150,000	4.21	4.21	2.45
December 16, 2019	554,496	4.21	4.21	2.63
February 25, 2020	139,100	4.21	4.21	2.55
February 25, 2020	65,000	4.21	4.21	2.39
July 3, 2020	5,000	4.35	4.35	2.62
July 3, 2020	15,000	4.35	4.35	2.61
July 3, 2020	5,000	4.35	4.35	2.63
July 3, 2020	4,674	4.35	4.35	3.41
September 25, 2020	2,000	4.35	4.35	2.62
September 25, 2020	4,674	4.35	4.35	3.40
October 25, 2020[(1)]	4,674	5.77	5.77	4.69
March 18, 2021	2,000	5.77	5.77	3.52
March 18, 2021	101,000	5.77	5.77	3.54
March 18, 2021	1,000	5.77	5.77	3.57
March 18, 2021	2,000	5.77	5.77	3.58
March 18, 2021	11,000	5.77	5.77	3.61
March 18, 2021	42,910	5.77	5.77	4.71

(1) Represents an equity-based award for services rendered in 2020.

Recently Adopted Accounting Pronouncements

See Note 2 to our consolidated financial statements and Note 2 to our unaudited interim consolidated financial statements found elsewhere in this prospectus for a description of recent accounting pronouncements applicable to our consolidated financial statements.

Off-balance Sheet Arrangements

During the periods presented, we did not have, nor do we currently have, any off-balance sheet arrangements as defined in the rules and regulations of the SEC.

Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

As of March 31, 2021, our cash consists of cash held as deposits at a major financial banking institution and highly liquid investments with an original maturity of three months or less at the date of purchase. As a result, the fair value of our portfolio is relatively insensitive to interest rate changes. As of March 31, 2021, we had no variable-rate debt outstanding and are therefore not exposed to interest rate risk with respect to debt. We believe a hypothetical 100 basis point increase or decrease in interest rates during the period presented would not have had a material impact on our financial results.

Foreign Currency Exchange Risk

All of our employees and our operations are currently located in the United States and our expenses are generally denominated in U.S. dollars. We believe a hypothetical 100 basis point increase or decrease in exchange rates during the period presented would not have had a material impact on our financial results.

Effects of Inflation

Inflation generally affects us by increasing our cost of labor and research, manufacturing, and clinical development costs. We do not believe that inflation and changing prices had a significant impact on our results of operations for the period presented herein.

Emerging Growth Company Status

As an emerging growth company, or EGC, under the Jumpstart Our Business Startups Act of 2012, or JOBS Act, we may delay the adoption of certain accounting standards until such time as those standards apply to private companies. Other exemptions and reduced reporting requirements under the JOBS Act for EGCs include presentation of only two years of audited consolidated financial statements in a registration statement for an IPO, an exemption from the requirement to provide an auditor's report on internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act, an exemption from any requirement that may be adopted by the Public Company Accounting Oversight Board, and less extensive disclosure about our executive compensation arrangements.

In addition, the JOBS Act provides that an EGC can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an EGC to delay the adoption of some accounting standards until those standards would otherwise apply to private companies. We have elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our consolidated financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We may remain classified as an EGC until the end of the fiscal year following the fifth anniversary of this offering, although if the market value of our common stock that is held by non-affiliates exceeds $700 million as of June 30 of any year before that time, or if we have annual gross revenues of $1.07 billion or more in any fiscal year, we would cease to be an EGC as of December 31 of the applicable year. We also would cease to be an EGC if we issue more than $1.0 billion of non-convertible debt over a three-year period.

BUSINESS

We are a biopharmaceutical company with an emerging pipeline focused on improving patient outcomes across a spectrum of debilitating oncologic and neurologic diseases by applying our deep knowledge of translational bioinformatics to every stage of the drug development process. We have more than a decade of experience in translational bioinformatics and generating insights into drug mechanisms of action and patient treatment responses. Building on this experience, we developed a disease-agnostic platform that enables us to utilize human data, novel biology and chemistry, and translational planning to create and advance our wholly owned pipeline. Our current development programs in oncology are focused on providing treatments for patients with solid tumors caused by mutations of the MAPK pathway and other oncologic signaling pathways. Our lead oncology product candidate, IMM-1-104, is designed to be a highly selective dual-MEK inhibitor that further disrupts KSR for the treatment of advanced solid tumors in patients harboring RAS mutant tumors. We plan to submit an IND for IMM-1-104 to the FDA in the first quarter of 2022. In addition, we anticipate filing at least two additional INDs for our other oncology programs, one in each of 2023 and 2024.

Overview

Our platform is enabled by our ability to efficiently analyze high-throughput molecular-level biochemical assays, including transcriptomics, genomics and/or proteomics, collectively referred to as Omics data. These different types of biochemical assays each provide us with unique information about the molecular mechanisms of disease biology and drug response. Since our inception, we have partnered with industry-leading pharmaceutical and biotechnology companies to perform a variety of analyses that utilize our expertise in translational bioinformatics. Examples publicly disclosed by our partners include our analyses of ibrutinib, ipilimumab, daratumumab, glatiramer acetate and pridopidine.

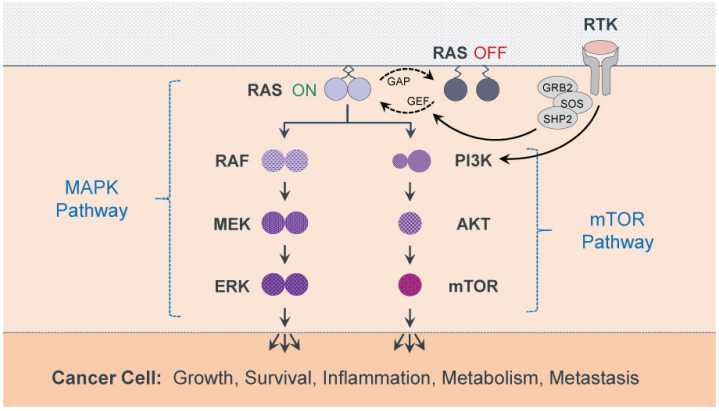
In early 2018, we began applying our proprietary platform and approach to internally develop our wholly owned pipeline of orally administered small molecule drug programs. Our approach played a critical role in determining the most important characteristics for and creation of IMM-1-104. Specifically, our platform enables us to:

- leverage insights from human data to identify disease transcriptional profiles we aim to counteract;
- identify novel biology, specifically evaluating new ways to drug an existing target by utilizing our proprietary Disease Cancelling Technology, or DCT, and analyze mechanisms of existing drugs;
- generate novel chemistry that overcomes MAPK-feedback loops to achieve optimal signaling dynamics; and
- profile IMM-1-104 in a large number of 3D models using our own translational planning to identify the types of cancer most likely to be sensitive to the product candidate.

Our current oncology programs target mutations of the RAS/RAF/MEK/ERK, or MAPK, and the PI3K/AKT/mTOR, or mTOR, pathways. The MAPK and mTOR signaling pathways run parallel to each other, and in over half of all cancers, one or both of these pathways are inappropriately activated (as depicted below). Existing drugs targeting these pathways are limited by toxicity, resistance and/or are narrowly focused

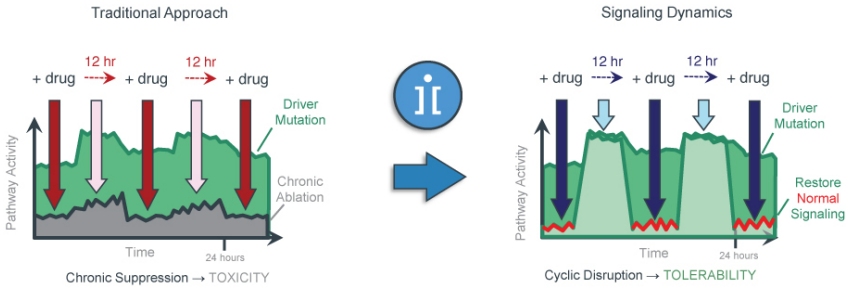
on subpopulations with specific mutations. The MAPK and mTOR pathways function to drive cell proliferation, differentiation, survival and a variety of other cellular functions that are critical for the formation of tumors.

Fundamental Cancer Signaling Cellular Pathways: MAPK and mTOR



Each of the programs in our oncology pipeline are designed to cause cyclical disruption of abnormal activation of the MAPK and mTOR signaling pathways while limiting drug-related toxicity. Traditional drug approaches have been designed to sustain pathway inhibition, which can cause on-target drug-related toxicity and limit clinical durability as a result of drug holidays or treatment discontinuation. Based on insights derived from our translational bioinformatics platform, our differentiated approach is to design drugs with short half-lives that provide enhanced mechanistic control of the target of interest and break tumor addiction, which is the tumor's ability to indefinitely self-replicate, metastasize and evade the host's immune system, among others capabilities, through deep cyclic disruption of these pathways (i.e., signaling dynamics). By cyclically disrupting these core oncogenic signaling pathways in cancer cells, we believe we can create novel therapeutics that maximize therapeutic activity in broad patient populations while providing an improved tolerability profile (as depicted below). We believe we are pioneers in this unique approach of leveraging signaling dynamics against tumor addiction.

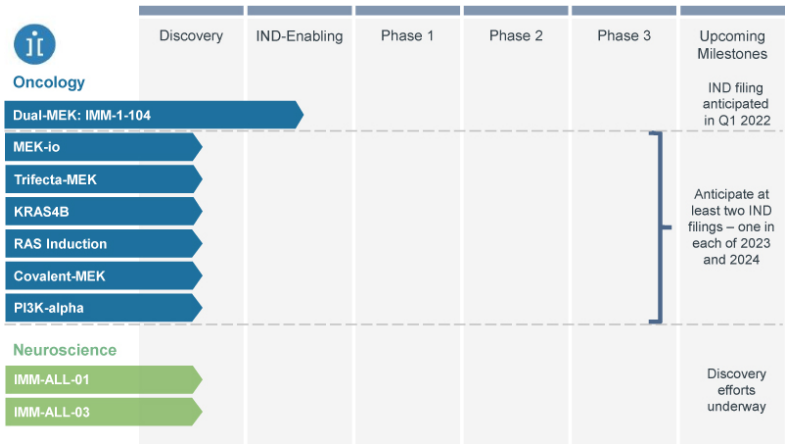
Signaling Dynamics: Traditional Sustained Inhibition Versus Our Cyclic Approach



Our Wholly Owned Pipeline

Our oncology programs target clinically validated pathways, but we seek to improve patient outcomes across a wide range of addressable solid tumor types through our differentiated programs. In addition to our

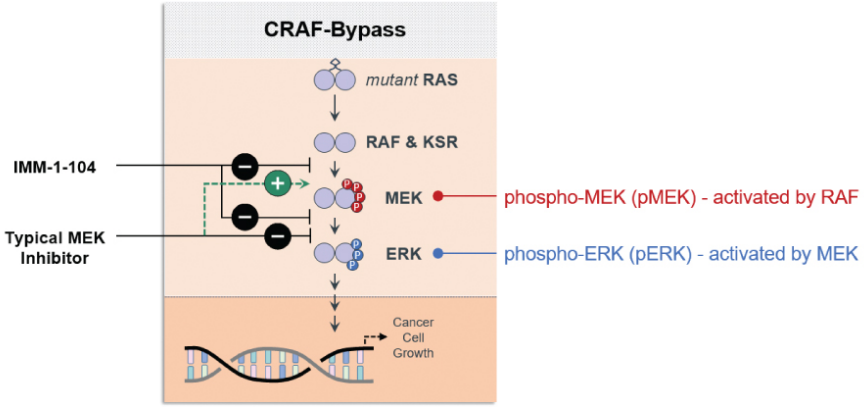
oncology pipeline, we are also leveraging our platform to build a neuroscience pipeline initially focusing on Alzheimer's disease, or AD. Our current pipeline of product candidates and discovery programs is depicted below.



Dual-MEK Program

Our dual mitogen-activated protein kinase kinase, or MEK, product candidate, IMM-1-104, is designed to be a highly selective inhibitor of mitogen-activated protein kinase kinase kinase, or ERK, activation (i.e., phosphorylation), prevent MAPK pathway reactivation and have a short plasma half-life that reduces sustained pathway inhibition (as depicted below). Unlike MEK inhibitors approved by the U.S. Food and Drug Administration, or the FDA, IMM-1-104 is designed to prevent RAF-mediated activation of MEK by engagement of the RAF activation loop on MEK, such as CRAF-bypass, and further disrupt the kinase suppressor of RAS 1 and 2, or KSR. Additionally, with a short plasma half-life, IMM-1-104 can achieve deep cyclic inhibition of the MAPK pathway. We believe this innovative method of pathway inhibition normalizes cancer cell signaling dynamics and prevents further damage to normal healthy cells. Collectively, we believe these qualities differentiate IMM-1-104 from known MEK inhibitors by potentially enabling IMM-1-104 to avoid drug resistance while improving tolerability.

Dual-MEK Inhibition Prevents Activation of MEK and Downstream Activation of ERK



In preclinical studies, we observed that IMM-1-104 inhibited MEK and ERK across a wide range of human and murine solid tumor models, including those with activating mutations in KRAS, NRAS, HRAS and BRAF. In addition, in head-to-head preclinical studies, we evaluated IMM-1-104 in murine-based KRAS and BRAF mutant solid tumor models representing lung, colon, pancreas and skin cancer, and observed tumor stasis or regression with insignificant body weight loss, or BWL, when compared to certain current FDA-approved MEK and BRAF inhibitors. We are also currently evaluating IMM-1-104 in a murine-based NRAS melanoma tumor model. Given the data observed in these preclinical studies, we believe that IMM-1-104 has the potential to deliver clinical benefit as monotherapy and, in the future, may potentially be administered in select drug combinations for patients with RAS and/or RAF mutant solid tumors who currently have limited treatment options.

IMM-1-104 is currently undergoing Investigational New Drug, or IND, enabling studies. We plan to submit an IND for IMM-1-104 to the FDA in the first quarter of 2022. We intend to initiate our first-in-human Phase 1 clinical trial of IMM-1-104 in the first half of 2022 for the treatment of advanced solid tumors in patients harboring RAS mutant tumors, if our IND for IMM-1-104 is accepted.

MEK-Immuno-Oncology and Other Oncology Programs

Our MEK-immuno-oncology, or MEK-io, program is focused on developing innovative allosteric MEK inhibitors to be administered in combination with select immune modulators (e.g., checkpoint inhibitors) for the treatment of “cold” solid tumors, which are immunologically inaccessible. Our investigational MEK-io program inhibitors are designed to target MEK in a way that disrupts the MAPK pathway at ERK and to also reduce baseline MEK activation. We are designing these inhibitors with unique pharmacokinetic, or PK, and pharmacodynamic, or PD, profiles that may enhance cycle inhibition time of MEK and ERK to optimize the patient’s immune response and promote maximal antitumor responses when administered in combination with select immune modulators.

We observed an initial *in vivo* proof-of-concept for our MEK-io program in a widely utilized syngeneic murine model. We evaluated one of our investigational MEK-io program inhibitors monotherapy and in combination with a checkpoint inhibitor as compared to vehicle to observe tumor growth inhibition in tumor-bearing BALB/C mice. Neither treatment alone altered tumor growth as compared to vehicle. However, when we administered our investigational MEK-io program inhibitor in combination with the checkpoint inhibitor, we observed greater than 50% tumor growth inhibition after two weeks of dosing as compared to vehicle treated mice.

Our MEK-io program is currently in the lead optimization stage of development and we are screening multiple advanced drug analogues for optimal PK and PD profiles that maximally modulate tumor growth inhibition through cyclic inhibition of MEK and ERK. Top candidates will be further evaluated in vivo for optimal drug-like properties that demonstrate synergistic tumor growth inhibition when combined with select immune modulators in preclinical cold solid tumor models.

We are leveraging our platform to continue expanding our oncology pipeline by targeting the MAPK and mTOR pathways in novel ways. We have five additional programs in various stages of drug discovery focused on targeting these pathways through novel pharmacological approaches.

In addition to the expected IND filing of IMM-1-104, we anticipate filing at least two additional INDs for our other oncology programs, one in each of 2023 and 2024.

Neuroscience Programs

AD is the most common form of dementia and one in three adults over the age of 65 succumb to AD-related dementia or another form of dementia. We believe there are specific subgroups of AD that can be stratified through gene expression and brain pathology. To identify AD subgroups, we have leveraged our platform to employ a patient-centric, data-driven approach. AD is a neurodegenerative disorder of uncertain cause and pathogenesis characterized by memory impairment and further cognitive decline that can ultimately affect the patient’s behavior, speech, visuospatial orientation and motor system. AD is a complex multifactorial disease driven by genetic and environmental causes that affects older adults and is one of the leading sources of

morbidity and mortality in the aging population. The estimated total healthcare costs for the treatment of AD was approximately $305 billion in 2020, with the cost expected to increase to more than $1 trillion by 2050.

Our neuroscience programs are in the early stages of drug discovery, and we are evaluating undisclosed targets to pursue a unique approach to treating AD. Our focus is to slow the progression of AD by developing targeted therapies for distinct biological mechanisms that we have identified in specific AD subgroups. Our platform and expertise in neurology and neuroscience have allowed us to determine biological differences in AD patients to help develop novel product candidates that may potentially address the significant unmet needs of this underserved patient population.

Our Team

We were founded in 2008 by our Chief Executive Officer and President, Benjamin J. Zeskind, Ph.D., and the Chairman of our board of directors, Robert J. Carpenter, with the goal of leveraging translational bioinformatics to generate insights into the mechanisms that cause certain patients to respond to specific medicines across multiple therapeutic areas. Our multi-disciplinary team brings together experts across translational bioinformatics, preclinical and clinical development in both oncology and neuroscience and includes individuals with extensive experience at some of the leading pharmaceutical companies, including Johnson & Johnson, AstraZeneca and Incyte. We are currently supported by a high-quality group of investors, including entities affiliated with Cormorant Asset Management, Surveyor Capital (a Citadel company), Rock Springs Capital and entities advised or sub-advised by T. Rowe Price Associates, Inc.

Our History

Our company is built on more than a decade of experience in translational bioinformatics. Since our founding in 2008, we have utilized this experience to generate insights into the mechanisms that cause certain patients to respond to specific medicines across therapeutic areas by analyzing Omics data. Our computational biology services business has helped us to better understand how translational bioinformatics can contribute to each stage of drug development, from early drug discovery to clinical development and through commercialization. However, we recognized the limitations of applying translational bioinformatics in isolation to specific stages of the drug development process and realized that bioinformatics could be even more helpful if applied continuously throughout the drug development process. Over time, we have developed a proprietary technology platform to facilitate that process and, in early 2018, we began applying the extensive insights from and capabilities of our platform and approach to create a wholly owned pipeline of drug programs, initially focusing on oncology.

Our Strategy

Our mission is to develop novel therapies by utilizing our disease-agnostic platform to address areas of high unmet medical need, initially in cancer and neurologic diseases. Our platform allows us to leverage human biological data to generate insights that are not constrained by the inherent limitations of conventional approaches or prevailing scientific views. We are developing novel product candidates that aim to optimize both safety and efficacy for diseases with suboptimal treatment options. To achieve our mission, we are executing a near-term strategy with the following key elements:

- ***Advance IMM-1-104 into Clinical Development.*** We believe that IMM-1-104 has the potential to treat broad populations of solid tumor patients, specifically those with inappropriate activation of the MAPK pathway. IMM-1-104 has been specifically designed to overcome MAPK-feedback loops and, combined with its intentionally short half-life, could have the potential to provide broader therapeutic activity and an improved tolerability profile relative to known MEK inhibitors. We believe IMM-1-104 has the potential to target patients with a broad spectrum of mutations in KRAS and NRAS, as well as other mutations that activate the MAPK pathway. IMM-1-104 is currently in IND-enabling studies, and we expect to submit an IND in the first quarter of 2022.
- ***Progress Our Pipeline of Additional MAPK and mTOR Pathway Programs to IND-Enabling Studies.*** Other key programs in our oncology pipeline also leverage our knowledge of the MAPK and mTOR pathways, translational bioinformatics and signaling dynamics. For example, we are advancing programs which modulate MEK to potentially enhance patient immune response to cancer as well as

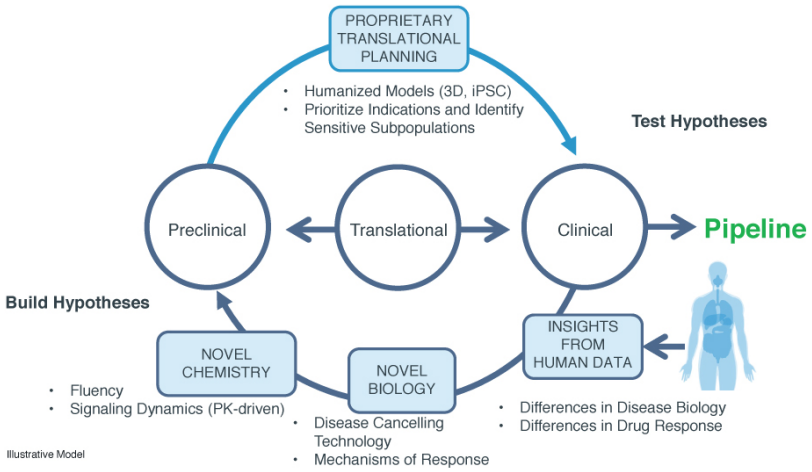
programs which modulate the formation of RAS dimers to kill RAS-driven tumors while sparing healthy cells. We are also applying our platform to other relevant pathways and have initiated a program targeting PI3Kα in the mTOR pathway. We intend to develop other programs for the mTOR pathway, as well as other oncogenic pathways. In addition to the expected IND filing of IMM-1-104, we anticipate filing at least two additional INDs for our other oncology programs, one in each of 2023 and 2024.

- ***Utilize Our Platform to Advance Our Neuroscience Programs.*** In addition to our extensive oncology pipeline, we have built a neuroscience pipeline initially focused on AD, which leverages key components of our platform. We have identified subgroups of AD with distinct molecular drivers and have identified unique undisclosed targets for these specific subgroups. Currently, we are developing investigational small molecules to inhibit these undisclosed targets, which we intend to continue advancing towards IND-enabling studies.
- ***Continue to Grow and Advance Our Platform.*** We have built a biopharmaceutical company that fully integrates bioinformatics across all aspects of drug discovery and development. We currently utilize our bioinformatics platform for our drug discovery efforts in oncology and neuroscience, and as we advance our product candidates into and through the clinic, we plan to utilize data and insights from our bioinformatics platform to not only guide future clinical development but to also provide key learnings back to our earlier stage programs. Lastly, we continue to iterate on our existing technology and processes, and develop new technologies for our platform, all aimed at creating the most efficient process for the development of product candidates that we believe have the potential to optimize both safety and efficacy in broad patient populations with high unmet medical needs.

Our Bioinformatics Approach

Leveraging our history in translational bioinformatics, we have built a biopharmaceutical company that incorporates our expertise into every step of our process to discover and develop novel product candidates. Our goal is to meaningfully improve patient outcomes as compared to drugs developed through traditional drug discovery approaches. Our integrated approach has already yielded programs that have exhibited preclinical tumor growth inhibition against a broad range of clinically challenging solid tumors, which are advancing towards the clinic. Our Dual-MEK program is currently in IND-enabling studies, while the rest of our programs are in earlier stage preclinical studies. We have expanded our team of experts, including drug discovery and clinical development experts, to develop a pipeline of product candidates by leveraging our translational bioinformatics expertise (as depicted below).

Our Bioinformatics Expertise Leveraged Through All Stages of Drug Discovery and Development



Cancer Overview

Cancer is the second most common cause of death worldwide with approximately 10 million deaths annually and an incidence of approximately 19.3 million new cases in 2020. Cancer is defined as a collection of diseases in which abnormal cells divide uncontrollably and can invade nearby tissues. The uncontrollable division of abnormal cells typically results in a malignant tumor (i.e., cancerous) or benign tumor (i.e., non-cancerous). There are two main categories of cancer: hematologic (i.e., blood) cancers and solid tumor cancers. Hematologic cancers are cancers of the blood cells, and include leukemia, lymphoma and multiple myeloma. Solid tumor cancers are cancers of any of the body's other organs or tissue, including the pancreas, skin, lung and colon. Core tumor capabilities seen in cancer patients include the ability to indefinitely self-replicate, develop new blood vessels (i.e., angiogenesis), evade cell death (i.e., apoptosis), sustain self-sufficient growth, invade other tissues (i.e., metastasis), alter signaling pathways, evade immune system responses and modify metabolism. Tumor survival is dependent on certain of these capabilities (i.e., tumor addiction).

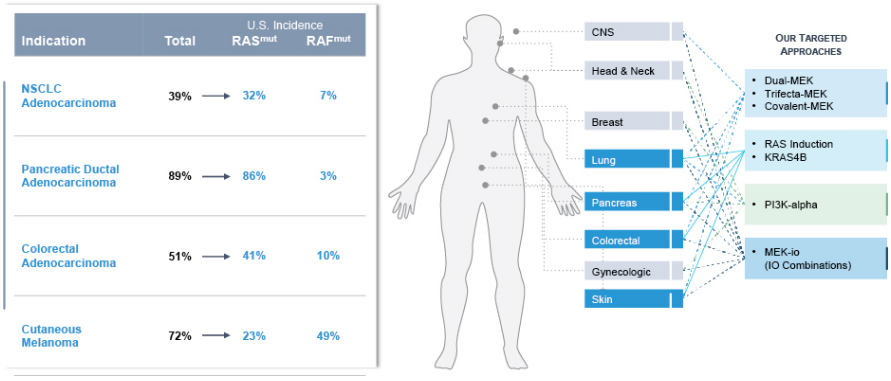
MAPK and mTOR Pathways

In all cells, signaling pathways govern how cells regulate themselves as well as direct activities in relation to other cells in the body. Two of the most commonly altered signaling pathways in cancer are the MAPK and mTOR pathways. MAPK and mTOR are both oncogenic signaling pathways that run parallel to each other. RAS is a family of related oncogenes found upstream in each pathway that codes for four highly related protein isoforms, HRAS, NRAS, KRAS4A and KRAS4B. In over half of all cancers, one or both of these pathways are inappropriately activated, often through mutations in the key members of the pathway, including RAS, RAF and PI3Kα. When RAS is switched "on" through the activation of the membrane-bound receptor tyrosine kinase, or RTK, the MAPK and mTOR pathways function to drive cell proliferation, differentiation, survival and a variety of other cellular functions that are critical for the formation of tumors. In addition, the membrane-bound RTKs can separately activate the mTOR pathway without the assistance of RAS.

Through widespread adaptation of molecular profiling, we now recognize that up to one in two cancer patients harbor tumors which are inappropriately activated through the MAPK pathway, and an additional one in three display alterations that impact the mTOR pathway. Many of these patients display tumors with activation mutations in RAS or RAF, which lie upstream of MEK and ERK. Because inappropriate activation of the MAPK and/or mTOR pathways supports many of the core tumor capabilities described above, efforts to create new therapeutics to target these pathways has been a high priority in cancer drug research. However, therapeutics that target the MAPK and mTOR pathways have not lived up to the expectations of effectively disrupting these pathways with high patient tolerability. Nearly all targeted therapeutics against the MAPK and mTOR pathways have been designed for sustained pathway suppression, which has resulted in on-target drug-related toxicity that limits clinical durability and potential drug-drug combinations. Furthermore, sustained irreversible covalent inhibition of these pathways may lead to treatment resistance, as highlighted in a recently published study in the New England Journal of Medicine. The study focused on patients treated with adagrasib, an irreversible covalent inhibitor of $KRAS^{G12C}$, and reported that 45% of patients (17 patients out of 38) in the study receiving adagrasib monotherapy developed resistance. Of these patients, many resistance mechanisms were observed involving non-G12C variations in KRAS, variations in NRAS or BRAF, or other resistance mechanisms related to the MAPK and mTOR pathways.

Developing novel therapeutics to effectively and safely target these pathways may provide clinical benefit in large patient populations with significant unmet needs. In addition, although these two pathways represent two of the most active areas in cancer drug discovery and development, targeted therapeutics that more effectively and safely normalize, but not ablate, ERK and mTOR signaling may uncouple drug activity and tolerability, while optimizing both. Our oncology pipeline is designed to non-chronically disrupt molecular pathways that enable tumor addiction while limiting drug-related toxicity of normal healthy cells that also rely, to a lesser degree, on these pathways.

Our Programs Target Aggressive Solid Tumors That Display High RAS/RAF Mutations

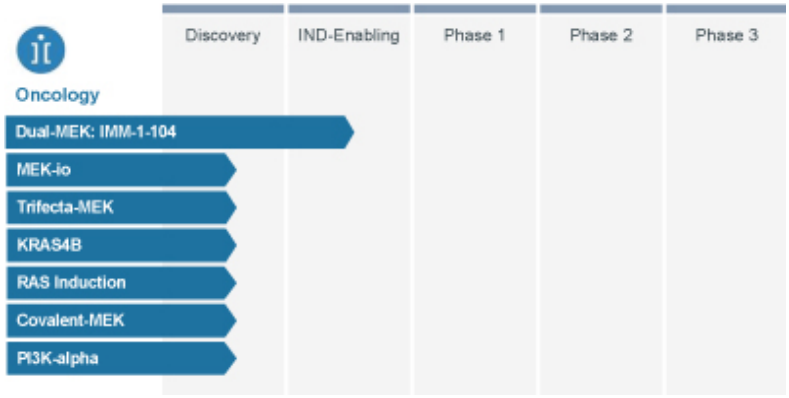


Our Differentiated Approach to Tackling Some the Most Challenging Cancers

We are leveraging our platform to target the MAPK and/or mTOR pathway. Our differentiated approach is to design drugs with short half-lives that provide enhanced mechanistic control of the target of interest and break tumor addiction through deep cyclic disruption of these pathways (i.e., signaling dynamics). We believe we are pioneers in this approach of leveraging signaling dynamics against tumor addiction, and our insights derived from our translational bioinformatics platform supports our belief that this approach may result in novel therapies targeting these pathways. Traditional drug approaches have been designed to sustain pathway inhibition, which leads to on-target drug-related toxicity and becomes limiting for clinical durability as a result of drug holidays or treatment discontinuation . The mutational activation and/or overexpression of the signaling components that activate the MAPK pathway are well-known, and MEK has been previously validated as a therapeutic target. We believe our programs, as compared to FDA-approved treatments targeting the MAPK pathway, have the potential to be differentiated by their unique engagement and PK and PD profiles. For example, our lead product candidate, IMM-1-104, is designed to inhibit ERK, prevent MAPK-pathway reactivation and have a short plasma half-life that reduces sustained pathway inhibition compared to other drugs targeting the same mechanistic pathway. By cyclically disrupting these core oncogenic signaling pathways in cancer cells, we believe we can create novel therapeutics in oncology that maximize therapeutic activity in broad patient populations while providing an improved tolerability profile as compared to other FDA-approved treatments for cancers caused by MAPK pathway activation.

Our Oncology Pipeline

Our current development programs in oncology are focused on providing treatments for patients with solid tumors caused by mutations of the MAPK and mTOR pathways. Our Dual-MEK product candidate, IMM-1-104, is currently being evaluated in IND-enabling studies and is complemented by multiple earlier-stage programs that also target these pathways. The following table summarizes our oncology pipeline:

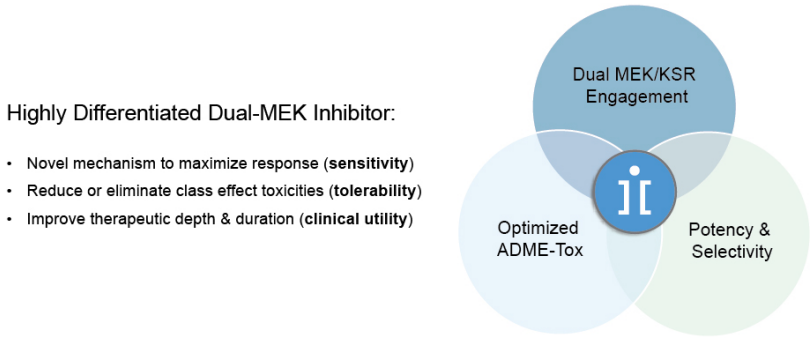


Overview of Our Lead Program: Dual-MEK

Background of MEK Inhibitors

Activating mutations of RAS and/or RAS in the MAPK pathway is observed in approximately 30% of all cancer patients, and inappropriate activation of this pathway is observed in up to 50% of all tumors and represents one of the most highly utilized signaling pathways in oncologic drug discovery. In aggressive solid tumors of the pancreas, skin, lungs and colon, mutations in RAS and/or RAF are even more common. For example, approximately 40% of lung cancers and approximately 90% of pancreatic cancers are due to RAS and/or RAF mutations. To date, FDA-approved MEK inhibitors have been ineffective at treating RAS mutant tumors when compared to BRAF mutant tumors because of a well-known mechanism of resistance, CRAF-mediated MEK activation, or the CRAF-bypass. In addition, a well-known limitation of current FDA-approved MEK inhibitors are their high rates of serious drug-related adverse events, most often in over 50% of treated patients, which results in drug intolerability. The longer half-life of these drugs (e.g., up to 2 to 4 days), or moderate half-life (e.g., 3 to 6 hours) with increased dosing frequency, contributes to high rates of adverse events because these drugs systemically circulate for an extended period of time destroying healthy normal cells, which also rely on the pathway for survival. Our goal in developing IMM-1-104 is to address these shortcomings to potentially provide patients with better outcomes, improved tolerability, durability and expand drug-drug combination opportunities (as depicted below).

IMM-1-104: Designed to be a Highly Differentiated Dual-MEK Inhibitor



Our Solution: IMM-1-104

We have leveraged our platform to develop our lead product candidate, IMM-1-104, which is designed to be a highly selective dual-MEK inhibitor that promotes additional scaffold-related disruption of KSR. We are developing IMM-1-104 to treat patients with cancer, including pancreatic, melanoma, colorectal and non-small cell lung cancer, or NSCLC, caused by mutations of RAS and/or RAF. In order to overcome MAPK-feedback and CRAF-mediated MEK activation, a well-known limitation of current FDA-approved MEK inhibitors, we developed IMM-1-104 to allosterically inhibit MEK by targeting the site lying adjacent to the binding pocket of adenosine triphosphate, or ATP, which results in downstream inhibition of ERK. In addition, unlike FDA-approved MEK inhibitors, IMM-1-104 is designed to prevent RAF-mediated activation of MEK by unique engagement of MEK that further disrupts KSR. We believe the bypass of these drug resistance mechanisms will provide for better patient outcomes by enhancing therapeutic activity throughout the course of treatment. By reducing steady state drug trough levels, we also designed IMM-1-104 to limit or reduce high rates of serious drug-related adverse events (e.g., ranging from 45% to 69%) that are observed in current FDA-approved MEK inhibitors, most often given in combination with a RAF inhibitor, which contribute to discontinuation rates of up to 10% to 15%.

With a goal of improving the tolerability profile of our MEK inhibitor, we designed IMM-1-104 to have a short plasma half-life of less than 2 hours, resulting in a near-zero steady state drug trough concentration that enables deep cyclic inhibition of the MAPK pathway. We believe this method of drug cadence-driven pathway inhibition has the potential to normalize cancer cell signaling dynamics and prevent further damage to normal healthy cells. Collectively, we believe these qualities may differentiate IMM-1-104 from known MEK inhibitors by potentially allowing IMM-1-104 to avoid drug resistance while improving tolerability due to its dual allosteric inhibition of MEK, KSR disruption and short plasma half-life.

Preclinical Studies Overview: IMM-1-104

In multiple preclinical studies, we observed that IMM-1-104 inhibited activated MEK (i.e., pMEK) and activated ERK (i.e., pERK) across a wide range of murine and humanized 3D solid tumor models, including those with activating mutations in KRAS, NRAS, HRAS and BRAF. In addition, in head-to-head preclinical studies, we evaluated IMM-1-104 in murine-based KRAS and BRAF mutant solid tumor models representing lung (i.e., A549), colon (i.e., Colon-26), pancreas (i.e., MIA PaCa-2) and skin cancer (i.e., A375), and observed tumor stasis or regression with insignificant BWL when compared to current FDA-approved MEK inhibitors, including selumetinib, binimetinib, encorafenib and AMG-510 (now known as sotorasib). We are also currently evaluating IMM-1-104 in a murine-based $NRAS^{Q61R}$ melanoma tumor model (i.e., SK-MEL-2). Given the data observed in our previously conducted preclinical studies, we believe that IMM-1-104 has the potential to deliver clinical benefit as monotherapy and, in the future, may potentially be administered in select drug combinations for patients with RAS and/or RAF mutant solid tumors who currently have limited treatment options.

Preclinical Studies: Maximum Tolerated Dose and Therapeutic Effect

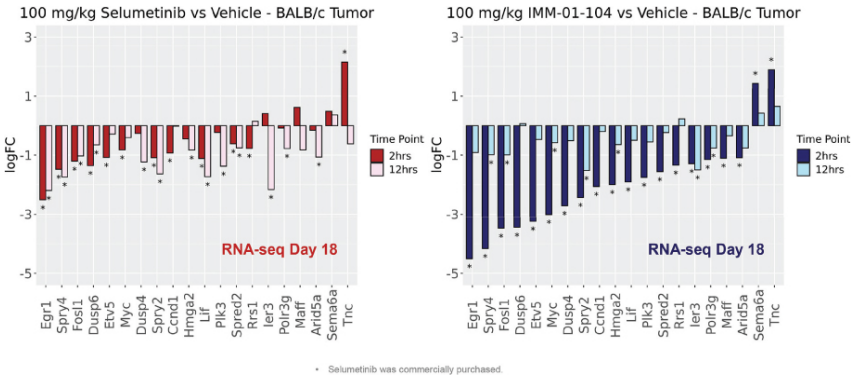
In our early maximum tolerated dose, or MTD, studies, we observed that oral administration of IMM-1-104 twice a day of up to 150 mg/kg/dose was well-tolerated in mice. In other preclinical studies, we observed that the maximum therapeutic effect of IMM-1-104 was reached when administered orally twice a day between 100 and 150 mg/kg/dose. These dosing studies provided the basis of IMM-1-104's dosing schedule in subsequent preclinical studies.

Preclinical Studies: Pharmacogenomics

In a pharmacogenomics study utilizing a colorectal $KRAS^{G12D}$ tumor model in BALB/c mice, we evaluated downstream ERK inhibition of the MAPK pathway after IMM-1-104 treatment. We orally administered vehicle, selumetinib and IMM-1-104 twice a day at 100 mg/kg/dose, then harvested the tumors after 18 days of chronic treatment at 2 and 12 hours following the last drug dose to evaluate RNAseq changes. The tumors were collected across distinct BALB/c mice and RNAseq changes were evaluated using statistical analysis software. Consistent with IMM-1-104's designed short plasma half-life, we observed deep, cyclic inhibition of most of the top genes in the ERK transcriptome, as noted by the differences of the dark and light blue bars, which we believe may improve tolerability by allowing healthy normal cells to regenerate before the next dose

is administered. For example, *Erg1* and *Spry4* were both downregulated over 16-fold at 2 hours after receiving the first dose on day 18 of the study, and at 12 hours after the first dose, which was prior to the second dose, both genes were approaching their baseline state when compared to vehicle treated tumors (as depicted below). In contrast to IMM-1-104, we did not observe deep cyclic inhibition of selumetinib, but rather observed sustained MAPK pathway suppression versus vehicle groups between the two timepoints on day 18 (as depicted below). The top 20 genes were a subset of a 52-gene signature for ERK signaling.

Head-to-Head Comparison of IMM-1-104 Against Selumetinib Using a Colon-26 Xenograft Tumor Model: Deep Cyclic Inhibition of the ERK Transcriptome

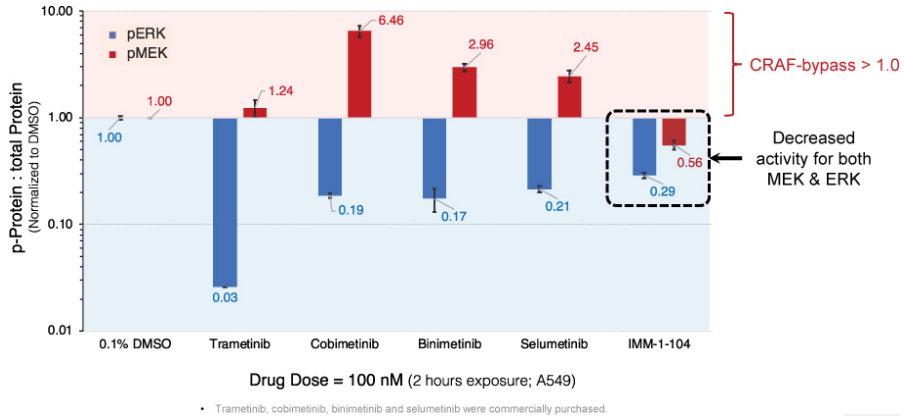


** Adjusted p-value < 0.05, for each treatment versus vehicle (n = 3-4 independent tumors per group)*

Preclinical Studies: Resistance to CRAF-bypass

We evaluated IMM-1-104 head-to-head against four FDA-approved MEK inhibitors for CRAF-bypass resistance in a KRAS mutant NSCLC tumor model. We exposed the tumor cells with 100 nM of each drug for 2 hours and evaluated MEK and ERK activation levels. We observed that IMM-1-104 was able to reduce overall activity of the MAPK pathway at ERK and pathway reactivation at MEK through a decrease in MEK and ERK activation, resulting in CRAF-bypass resistance. In contrast, we observed that all four FDA-approved MEK inhibitors displayed an increase in activated MEK, resulting in CRAF-bypass (as depicted below).

Head-to-Head Comparison of IMM-1-104 against Four FDA-Approved MEK Inhibitors Using a A549 Xenograft Tumor Model: Prevented Downstream Activation of ERK (↓ pERK) and Inhibited Activation of MEK (↓ pMEK)

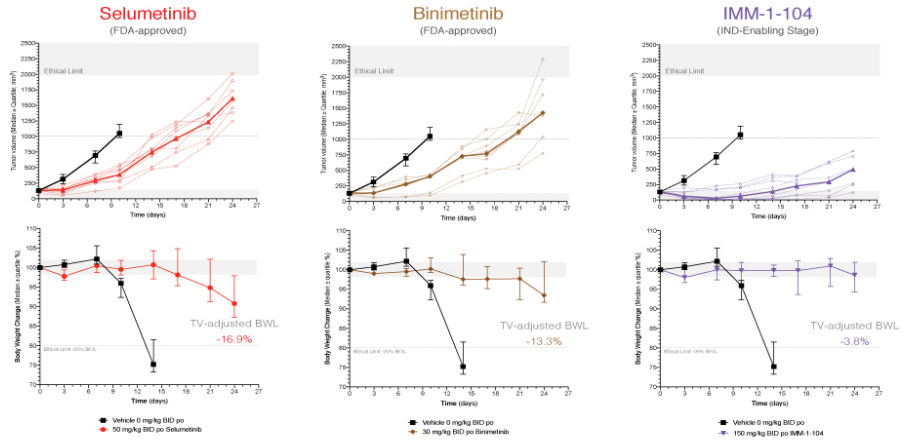


• Trametinib, cobimetinib, binimetinib and selumetinib were commercially purchased.

Preclinical Studies: Tumor Regression and Body Weight Loss

We evaluated IMM-1-104 head-to-head against binimetinib and selumetinib in an aggressive murine colorectal tumor model (i.e., Colon-26), which expresses mutant $KRAS^{G12D}$. We observed that IMM-1-104 demonstrated greater tumor growth inhibition, where notably 5 of 8 mice experienced tumor regression during the first 10 days of dosing, as well as greater tolerability, evidenced by changes in BWL. In addition, we observed that IMM-1-104 had overall better durability of antitumor response as compared to the two FDA-approved MEK inhibitors, as demonstrated by significantly lower tumor volume, or TV, progression. This study demonstrated that IMM-1-104 as compared to binimetinib and selumetinib provided greater tumor inhibition, lower BWL and lower TV progression (as depicted below).

Head-to-Head Comparison of IMM-1-104 Against Binimetinib and Selumetinib Using a Colon-26 Xenograft Tumor Model: Body Weight Loss and Tumor Volume

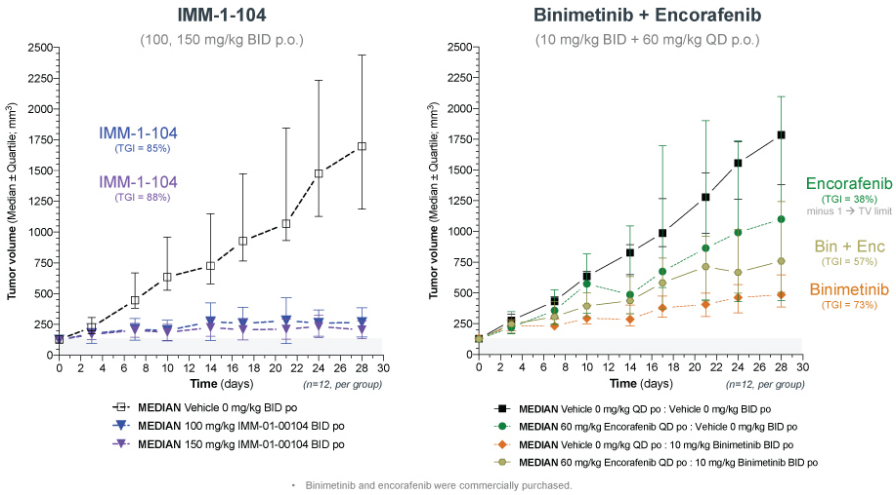


• Selumetinib and binimetinib were commercially purchased.

After observing the results of the Colon-26 tumor study, we completed two follow-up *in vivo* studies, where we evaluated IMM-1-104 head-to-head against binimetinib or encorafenib, a BRAF inhibitor, as monotherapy plus the combination of binimetinib with encorafenib in BALB/c mice tumor models with RAS and RAF mutations. It should be noted that when encorafenib is used to treat KRAS mutant tumors that are wild type for BRAF, it can paradoxically activate the MAPK pathway and antagonize the effects of binimetinib. In addition, the drug doses and schedules used for binimetinib and encorafenib in these studies were consistent with what was provided in their NDAs to the FDA.

We evaluated IMM-1-104 head-to-head against binimetinib monotherapy and in combination with encorafenib in the $KRAS^{G12S}$ human NSCLC tumor model (i.e., A549). When comparing IMM-1-104 to binimetinib monotherapy, we observed that IMM-1-104 had greater tumor growth inhibition (as depicted below). The observations of IMM-1-104 head-to-head against binimetinib alone and in combination with encorafenib, which was not considered relevant for a KRAS mutant, RAF wild-type tumor model, has been included in the figure below for comparison purposes.

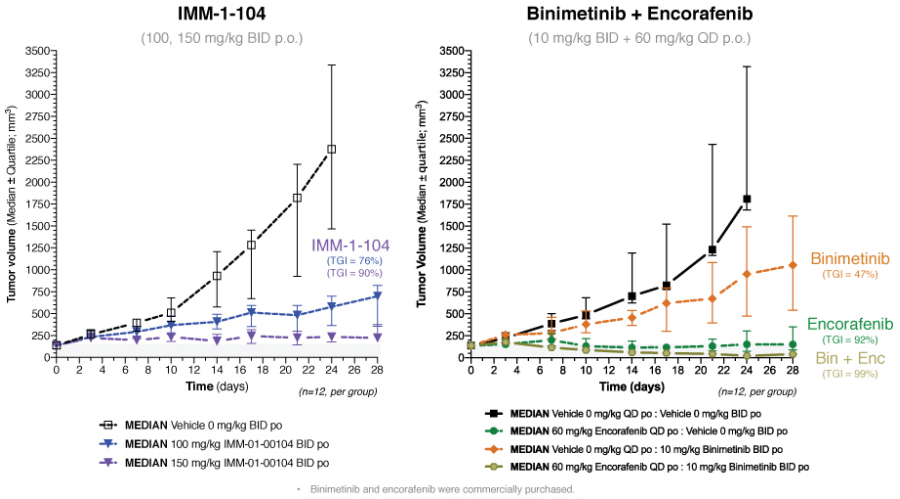
Head-to-Head Comparison of IMM-1-104 Against Binimetinib +/- Encorafenib Using a A549 Xenograft Tumor Model: Tumor Volume



• Binimetinib and encorafenib were commercially purchased.

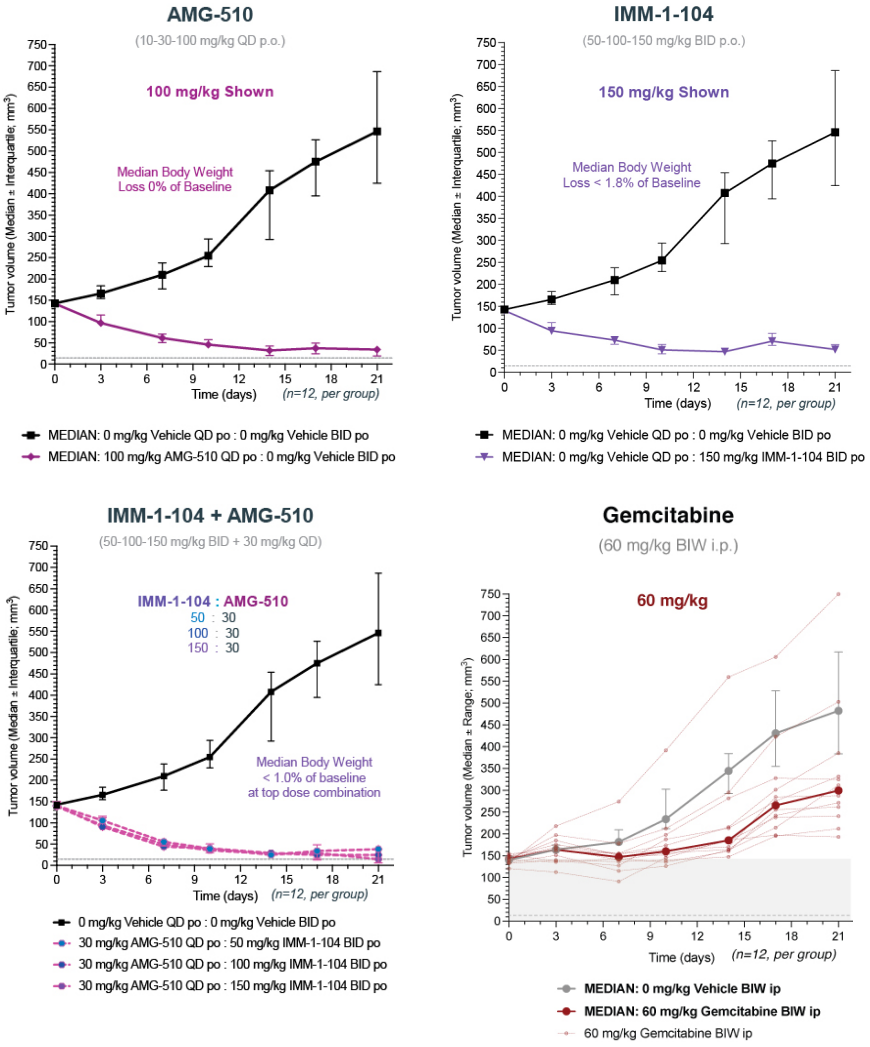
We also evaluated IMM-1-104 head-to-head against binimetinib and encorafenib monotherapy and the combination of binimetinib with encorafenib in a $BRAF^{V600E}$ human melanoma tumor model. It should be noted that the administered combination of binimetinib and encorafenib for BRAF mutant melanoma, such as $BRAF^{V600E/K}$, is an FDA-approved combination. As expected, when comparing IMM-1-104 alone to binimetinib in combination with encorafenib, we observed that the combination therapy had greater tumor growth inhibition (as depicted below). However, when we compared IMM-1-104 to binimetinib monotherapy, we observed that IMM-1-104 had greater tumor growth inhibition (as depicted below). We believe the greater single agent MEK inhibitor activity provides an opportunity to expand IMM-1-104 into drug-drug combinations with other MAPK pathway inhibitors, such as encorafenib, to treat RAF mutant cancers, such as $BRAF^{V600E/K}$, among other MAPK pathway mutations.

Head-to-Head Comparison of IMM-1-104 Against Binimetinib +/- Encorafenib Using a A375 Xenograft Tumor Model: Tumor Volume



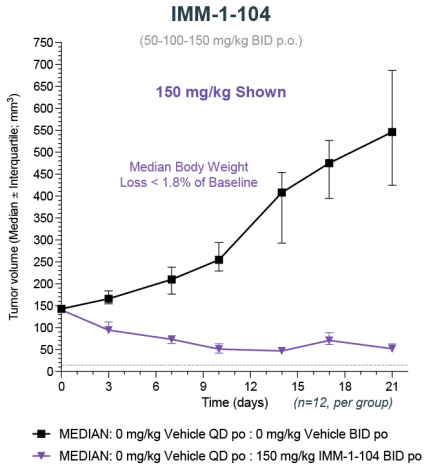
In a further *in vivo* study based on humanized 3D tumor model data, we evaluated IMM-1-104 head-to-head against AMG-510 and gemcitabine alone, and IMM-1-104 in combination with AMG-510, for 21 days in the $KRAS^{G12C}$ mutant tumor model (i.e., MIA PaCa-2). In a previous study conducted by a third-party, AMG-510 demonstrated sensitivity to this pancreatic tumor model. Comparing IMM-1-104 alone, against AMG-510 and in combination with AMG-510, we observed tumor regressions with insignificant BWL (i.e., within 3% of baseline), which we believe indicates activity, durability and tolerability of IMM-1-104 against a $KRAS^{G12C}$ mutant pancreatic cancer model (as depicted below).

Head-to-Head Comparison of IMM-1-104 +/- AMG-510 and Gemcitabine Using a MIA PaCa-2 Xenograft Tumor Model: Tumor Volume



In a further *in vivo* study based on humanized 3D tumor model data, we evaluated IMM-1-104 monotherapy as compared to vehicle for 21 days in the $NRAS^{Q61R}$ mutant tumor model (i.e., SK-MEL-2). We observed tumor regressions in all mice treated with IMM-1-104, which we believe indicates activity and durability of IMM-1-104 against an $NRAS^{Q61R}$ mutant melanoma cancer model (as depicted below).

Evaluation of IMM-1-104 as Compared to Vehicle Using a SK-MEL-2 Xenograft Tumor Model: Tumor Volume

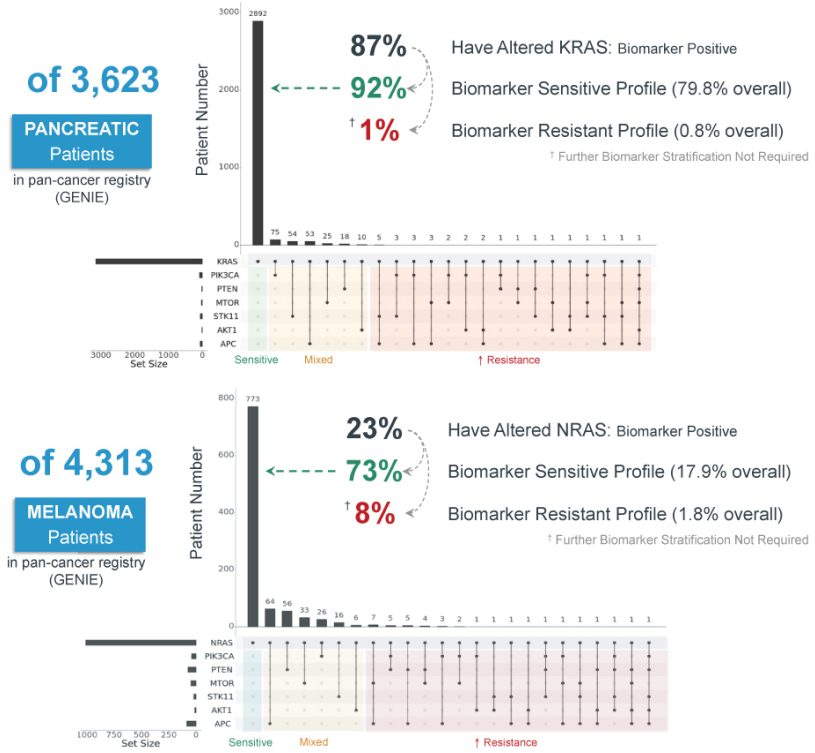


Preclinical Studies: 3D Tumor Growth Models

3D tumor growth models mimic the tumor microenvironment, or TME, more closely than 2D models, and we believe the 3D model more accurately reflects human tumor biology and complexity when evaluating pharmacological data of MAPK pathway inhibition *in vivo*. We established several dozen humanized 3D tumor models that display mutations in the RAS isoforms, amongst other mutated MAPK pathway targets, including BRAF, CRAF and ERK, to evaluate their sensitivities to IMM-1-104. In general, we observed that tumor models with KRAS or NRAS mutations and certain molecular profiles were most sensitive to IMM-1-104, followed closely by tumor models with BRAF mutations. For example, the IC_{50} of IMM-1-104 ranged from 68.7 nM in $NRAS^{Q61K}$ to 214.7 nM in $NRAS^{G12D}$, whereas the IC_{50} of IMM-1-104 ranged from 814.7 nM to greater than 10,000 nM in $BRAF^{V600E}$ and certain RAS mutants, respectively. More specifically, our 3D tumor modeling data suggested that KRAS mutant pancreatic cancer and NRAS mutant melanoma may be particularly sensitive to IMM-1-104.

To further examine the translational opportunity in KRAS mutant pancreatic cancer and NRAS mutant melanoma, we evaluated several of these cancer mutations utilizing real-world data through a pan-cancer registry, the Genomics Evidence Neoplasia Information Exchange, or GENIE. The total number of patients in the analysis are depicted below in blue and the percentage of patients with a known mutation in KRAS or NRAS are shown as a percentage of the total patients (depicted below in black). Biomarker sensitive profiles (depicted below in green) and biomarker resistant profiles (depicted below in red) are projected subsets of patients with mutated KRAS or NRAS that may be sensitive or resistant to IMM-1-104. We observed that the overwhelming majority of pancreatic cancers associated with KRAS mutations (i.e., 92%) and melanoma associated with NRAS mutations (i.e., 73%) are found to harbor a biomarker profile that may be sensitive to IMM-1-104 (as depicted below).

Translational Profiling for KRAS Mutant Pancreatic Cancer and NRAS Mutant Melanoma Utilizing a Pan-Cancer Registry, GENIE



Clinical Development Overview: IMM-1-104

IMM-1-104 is currently undergoing IND-enabling studies. We plan to submit an IND for IMM-1-104 to the FDA in the first quarter of 2022. We continue to expand our preclinical pharmacology models, including research to further understand sensitivity and resistance biomarkers related to IMM-1-104. We also plan to conduct 28-day good laboratory practices, or GLP, orally dosed safety and toxicology studies in rats and dogs, and also plan to perform PK studies in non-human primates prior to initiating our Phase 1 clinical trial of IMM-1-104. We intend to initiate our first-in-human Phase 1 clinical trial of IMM-1-104 in the first half of 2022 for the treatment of advanced solid tumors in patients harboring RAS mutant tumors if our IND for IMM-1-104 is accepted. The Phase 1 clinical trial of IMM-1-104 is being designed to primarily evaluate its safety and tolerability, and to also identify dose-limiting toxicities.

Our clinical development plan for IMM-1-104 will initially focus on indications selected by our translational data. Additional indications will be based on future preclinical studies and clinical trial outcomes. Our goal is to further expand the development of IMM-1-104 in indications, including a broad range of RAS and/or RAF mutant tumors. In addition, we plan to evaluate IMM-1-104 in combination with FDA-approved MAPK pathway inhibitors to treat certain cancers in the future.

MEK-io Program

We are developing innovative investigational allosteric MEK inhibitors to be administered in combination with select immune modulators (e.g., checkpoint inhibitors) for the treatment of “cold” solid tumors. Our

investigational MEK-io program inhibitors are designed to target MEK in a way that disrupts the MAPK pathway at ERK and to also reduce baseline MEK activation. We are designing these inhibitors with unique PK and PD profiles that may enhance cycle inhibition time of MEK and ERK to optimize the patient's immune response and promote maximal antitumor responses when administered in combination with select immune modulators. KRAS mutant tumors impact approximately 15% of patients globally and include cold or "non-inflamed" tumors. Cold tumors are immunologically inaccessible, meaning the patient's immune system cannot provide an appropriate antitumor response because the lack of T-cell infiltration in the tumor, which is required for the immune system (i.e., T-cells) to find, target and attack the tumor. Checkpoint inhibitors work by helping to reactivate and enhance the patient's immune system by allowing T-cells to better provide an appropriate antitumor response. If a cold tumor were to become "hot" or "inflamed," this would create an inflammatory process enabling T-cells to infiltrate the tumor and allow them to recognize and attack the tumor (i.e., an antitumor response). We believe our investigational MEK-io program inhibitors have the potential to turn a cold tumor hot, and when administered in combination with a checkpoint inhibitor, could provide an innovative approach to treat patients with cold solid tumors by providing MEK/ERK inhibition and optimizing antitumor response, which would not typically be seen in these patients.

We observed an initial *in vivo* proof-of-concept for our MEK-io program in a widely utilized syngeneic murine model. We evaluated one of our investigational MEK-io program inhibitors monotherapy and in combination with a checkpoint inhibitor as compared to vehicle to observe tumor growth inhibition in tumor-bearing BALB/C mice. Neither treatment alone altered tumor growth as compared to vehicle. However, when we administered our investigational MEK-io program inhibitor in combination with the checkpoint inhibitor, we observed greater than 50% tumor growth inhibition after two weeks of dosing as compared to vehicle treated mice.

Our MEK-io program is currently in the lead optimization stage of development and we are screening multiple advanced drug analogues for optimal PK and PD profiles that maximally modulate tumor growth inhibition through cyclic inhibition of MEK and ERK. Top candidates will be further evaluated in vivo for optimal drug-like properties that demonstrate synergistic tumor growth inhibition when combined with select immune modulators in preclinical cold solid tumor models.

Trifecta-MEK Program

We are developing novel product candidates that are designed to uniquely engage MEK and inhibit the upstream activation events of MEK and the downstream activation events of ERK in MEK itself, for the treatment of solid tumors. We believe the inhibition of upstream and downstream activation events of MEK and ERK bypass MAPK pathway reactivation events (i.e., drug resistance). Our investigational Trifecta-MEK program inhibitors are designed to be differentiated from IMM-1-104 due to their potential novel allosteric inhibition of MEK and KSR disruption, along with their unique PK approach. The potential dosing intervals of our investigational Trifecta-MEK program inhibitors may broaden the application of these inhibitors to metabolically diverse RAS and RAF mutant tumors. We are designing our investigational Trifecta-MEK program inhibitors to be administered as monotherapy to provide potentially better alternatives to combination therapies inhibiting MEK and RAF in BRAF mutant tumors.

We have evaluated one of our investigational Trifecta-MEK program inhibitors head-to-head against binimetinib and encorafenib in a cell-based potency study to observe comparisons in the reduction of activated MEK and ERK in $KRAS^{G12S}$ and $BRAF^{V600E}$ mutant tumor models. In the KRAS mutant tumor model, our investigational Trifecta-MEK program inhibitor provided greater inhibition of activated MEK and ERK as compared to binimetinib and encorafenib (as depicted below). In the BRAF mutant tumor model, our investigational Trifecta-MEK program inhibitor displayed greater inhibition of activated MEK and ERK as compared to binimetinib, and greater activated ERK inhibition as compared to encorafenib (as depicted below). Our Trifecta-MEK program is currently in the drug discovery stage of development.

Head-to-Head Comparison of One of Our Investigational Trifecta-MEK Program Inhibitors Against Encorafenib and Binimetinib Using A549 and A375 Xenograft Tumor Models

A549 Tumor Model: $KRAS^{G12S}$ mutant NSCLC

Compound	pERK: tERK 100 nM A549 % of control, 4h	pMEK: tMEK 100 nM A549 % of control, 4h	Notes
0.1% DMSO	1.000	1.000	Vehicle Control
Encorafenib	2.693	3.431	Paradoxical MAPK Activation
Binimetinib	0.173	4.031	CRAF-bypass Evident
Trifecta-MEK*	**0.011**	**0.345**	**pERK and pMEK control**

A375 Tumor Model: $BRAF^{V600E}$ mutant Melanoma

Compound	pERK: tERK 100 nM A375 % of control, 4h	pMEK: tMEK 100 nM A375 % of control, 4h	Notes
0.1% DMSO	1.000	1.000	Vehicle Control
Encorafenib	0.023	0.039	Prevents pMEK (BRAF inhibitor)
Binimetinib	0.057	1.094	BRAF activity stable (pMEK)
Trifecta-MEK*	**0.002**	**0.095**	**pERK and pMEK control**

- Binimetinib and encorafenib were commercially purchased.

*One of our investigational Trifecta-MEK program inhibitors.

KRAS4B Program

We are developing investigational mutation agnostic KRAS4B inhibitors that are designed to bind to a unique, undisclosed site on KRAS4B for the treatment of solid tumors. We believe our investigational KRAS4B inhibitors have the potential to disrupt RAS nanocluster biology and prevent MAPK signaling in patients with KRAS mutant tumors, which represent approximately 15% of all cancer patients. Although drugs in this class have begun targeting RAS mutations, such as $KRAS^{G12C}$, we believe a majority of KRAS mutations, which we are designing our KRAS4B inhibitors to target, will remain unaddressed.

In an *in vitro* tumor model, we observed a half maximal tumor inhibitor concentration, or IC_{50}, of 1 µM for one of our investigational KRAS4B inhibitors. A low IC_{50} value means that a drug is effective at low concentrations and may provide lower systemic toxicity when administered to the patient because of the low concentration required to generate therapeutic activity. Based on this tumor model, we believe our investigational KRAS inhibitors may achieve KRAS4B inhibition when administered at low concentrations, providing a potentially improved tolerability profile as compared to other FDA-approved MAPK pathway inhibitors. Our KRAS4B program is currently in the drug discovery stage of development.

RAS Induction Program

We are developing investigational RAS inducers that are designed to hyperactivate the MAPK pathway to potentially induce tumor cell death. Our RAS inducers are designed to be agnostic to known activating mutations of any oncogene of the MAPK pathway, providing the potential clinical opportunity to effectively treat any patient with an activated MAPK pathway, which represents over 50% of all cancer patients globally. A recent study validated this novel pharmacological approach by demonstrating that the hyperactivation of the MAPK pathway in tumor cells that express mutant RAS or RAF are intolerant to further increases in

activity at the level of ERK and induce tumor cell death. This approach was further validated by clinical observations of secondary tumor reductions in some patients when targeted agents that inhibit the MAPK pathway were discontinued.

In an *in vitro* KRAS mutant tumor model, we observed cell-based induction of the MAPK pathway at activated ERK of 844% when administering 30 μM of one of our RAS inducers. Additional *in vivo* modeling is required to validate this pharmacologic strategy, but we believe that, if successful, short pulsatile target induction will be critical. Our RAS induction, or RASi, program is currently in the drug discovery stage of development.

Covalent-MEK Program

We are developing investigational irreversible allosteric inhibitors of MEK by attacking one of three critical amino acids lying adjacent to the binding pocket. We believe the covalent, or irreversible inhibition, fully disrupts MEK enzymatic activity completely avoiding any potential drug resistance from MAPK pathway reactivation events. Covalent-MEK's novel pharmacological approach provides scaled attenuation of the MAPK pathway disruption that is anchored to the half-life of MEK itself, which has been reported to be approximately 12 to 14 hours.

Our Covalent-MEK program is in the drug discovery stage of development and builds on our dynamic portfolio of novel and mechanistically distinct MEK inhibitors.

PI3K-alpha Program

We are developing investigational allosteric PI3Kα inhibitors designed to target PI3Kα agnostically in common mutations and further disrupt upstream activation events of the mTOR pathway. Similar to IMM-1-104, we intend to design our PI3Kα inhibitors with a short plasma half-life to potentially normalize tumor signaling dynamics while retaining healthy normal cells. While still in the early drug discovery stage of development, we envision our PI3K-alpha program will be able to address significant unmet clinical needs in certain subsets of cancer, as well as reaching a broader patient population in combination with one or more of our MEK or RAS drug programs, where the mTOR pathway may synergistically work in tandem with MAPK pathway inhibition.

Our Neuroscience Programs

In addition to our extensive oncology pipeline, we are also leveraging our platform to build a neuroscience pipeline initially focusing on AD. Our neuroscience programs are in the early stages of drug discovery, and we are evaluating undisclosed targets to pursue a unique approach to treating AD. We believe by treating AD-related neuroinflammation, rather than treating amyloid beta protein, or β-amyloid, and hyperphosphorylated tau deposition in the brain, we may be able to slow the progression of AD. We believe our platform and expertise in neurology and neuroscience has allowed us to determine biological differences in AD patients to help develop novel product candidates that have the potential to address the significant unmet needs of this underserved patient population.

Alzheimer's Disease Overview

AD is a neurodegenerative disorder of uncertain cause and pathogenesis and is the most common form of dementia. AD is characterized by memory impairment and further cognitive decline that can ultimately affect the patient's behavior, speech, visuospatial orientation and motor system. AD is a complex multifactorial disease driven by genetic and environmental causes that affects older adults and is one of the leading sources of morbidity and mortality in the aging population. Established risk factors for AD include age, family history of dementia, rare dominantly inherited mutations in genes that impact β-amyloid in the brain (as described below) and apolipoprotein E epsilon 4 allele (as described below). The disease is most often categorized into three different groups: early-onset AD, late-onset AD and familial AD. Late-onset AD, also referred to as sporadic AD, is the most common form of the disease representing approximately 90% of the patients, and is classified in patients who present with symptoms at older ages (i.e., ≥ 65 years), while early-onset AD is classified in patients who present with symptoms at younger ages (i.e., < 65 years). Familial AD is an inherited

form of AD (i.e., genetic) and patients with early-onset AD most often have some inherited form of the disease. In contrast, sporadic AD most often involves common and rare genetic risk factors, as well as environmental factors.

Available data supports a worldwide prevalence of AD of approximately 35 million people, or approximately 6 million people in the United States. The prevalence of AD is known to increase exponentially with age, essentially doubling every 5 years after the age of 65. Diagnosis of AD is typically only considered after symptoms manifest and while the diagnosis of AD can be based on clinical criteria or detection of certain biomarkers, such as β-amyloid and tau, a postmortem histopathologic examination is required to confirm the diagnosis. Recent emerging evidence supports that neurological changes may occur years before patients start to experience early clinical manifestations of AD, which is most often memory impairment.

Limitations of Current Targeted Therapies for Alzheimer's Disease

Since 2003, only one new treatment for AD has been approved by the FDA, representing a significant unmet medical need. Despite clinical trials of numerous agents over a wide range of mechanisms, including small molecule inhibitors developed to treat tau deposition, only one disease-modifying treatment, which treats β amyloid deposition, has been successfully developed. There are currently only six FDA-approved treatments for AD, and five of these treatments are widely considered to only briefly and modestly improve AD symptoms, ultimately failing to prevent or slow disease progression. Patients may develop AD irrespective of β amyloid deposition. Without a disease-modifying treatment that targets the underlying cause of AD, many AD patients require daily supportive care from their families or other caregivers.

Pathogenesis of Alzheimer's Disease

While the pathogenesis of AD remains unclear, the genetic basis for early-onset and familial AD is understood most clearly. Most AD patients appear to have an overproduction and/or decreased clearance of β-amyloid, which is neurotoxic. This explanation of AD is otherwise known as the "amyloid hypothesis." β-amyloid is produced by the cleavage of a protein translated from the amyloid precursor protein gene, or *APP*, and cleaved by α-secretase, β-secretase, and γ-secretase. Presenilin is a sub-component of γ-secretase and is partially responsible for cleaving *APP*. Mutations in presenilin 1 gene, or *PSEN1*, or presenilin 2, or *PSEN2*, and *APP* result in overproduction of β-amyloid and are known to cause familial AD in greater than 95% of patients. In addition, the pathogenesis of AD is believed to involve a second protein, tau.

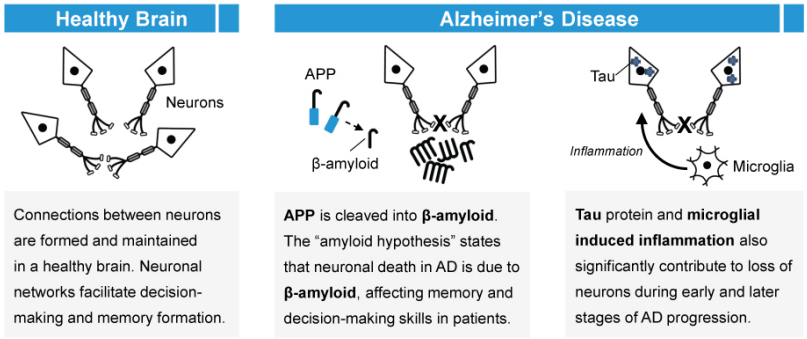
Tau plays a role in stabilizing the biological mechanisms required for facilitating neuronal activity and communication. In patients suffering from AD, observations have shown that tau accumulates and causes neurotoxicity as a result of its hyperphosphorylation. In addition, transmission of pathologic forms of tau between neurons has been proposed to account for the spread of AD in the brain.

There are several other important and potentially overlapping pathways that are considered to be involved in AD. For example, the strongest association of sporadic AD involves human apolipoprotein E gene, or *APOE*. *APOE* is involved in multiple cellular processes, including cholesterol transport and immune regulation, amongst others. *APOE* is known to have three alleles, including epsilon 4, or *APOE4*. Carriers of one *APOE4* are two to three times more likely to develop AD as compared to noncarriers, and those with two *APOE4* are at approximately 8 to 12 times more likely to develop AD. Despite *APOE4*'s strong link to sporadic AD, some carriers of *APOE4* never develop any cognitive decline. Unlike familial and early-onset AD, the genetic basis for sporadic AD is complex and poorly understood, and often involves environmental factors.

Pathology of Alzheimer's Disease

The hallmark neuropathologic changes of AD are diffuse and neuritic plaques, marked by extracellular β-amyloid deposition and neurofibrillary tangles, comprised of the intracellular accumulation of hyperphosphorylated tau (as depicted below). The pathology of AD is characterized by the widespread death of neurons in the brain and follows a destructive trajectory starting at the hippocampus, which is responsible for learning and memory. As AD progresses, the pathology gradually spreads to other important regions of the brain further causing cognitive decline. Among AD patients, the levels of brain atrophy vary and the underlying cause of this is unknown.

Healthy Brain Compared to an AD Patient's Brain with β-Amyloid and Tau Deposition



Heterogeneity Among Alzheimer's Disease Patients

A growing body of evidence suggests that AD is a heterogeneous group of diseases, which may partially explain the lack of consistent clinical data, including clinical trials. The cardinal symptoms of AD are cognitive impairment, including memory impairment, loss of executive function, impaired judgement and problem solving, behavioral and psychological problems, and visuospatial impairment. While nearly all AD patients struggle with cognitive decline, there is no prescribed pattern or progression of symptoms. For example, some AD patients have significant β-amyloid and hyperphosphorylated tau deposition, but experience little or no cognitive impairment.

The pattern of memory impairment in patients suffering from AD is distinctive. Memory of events occurring at a particular time and place is often profoundly affected in these patients. These memory deficits develop insidiously and progress slowly over time, evolving to include deficits of semantic memory (i.e., general knowledge accumulated throughout life) and immediate recall. Impairments of procedural memory (i.e., how to perform certain actions and skills) appear only in the late stages of AD. In addition, behavioral and psychologic symptoms become more common in the middle to late course of the disease. These can begin with relatively subtle symptoms including apathy, social disengagement and irritability. However, emergence of behavioral disturbances such as agitation, aggression, wandering and psychosis are seen as well. Approximately 11% of AD patients suffer from some form of psychosis and at least 75% of AD patients deal with agitation, aggression and wandering. Although the signs and symptoms of AD are understood, the underlying cause of the disease, including progression of certain aspects of the disease, still remain unknown and provide an opportunity for the development of disease-modifying treatments that would address significant unmet needs in the underserved AD patient population.

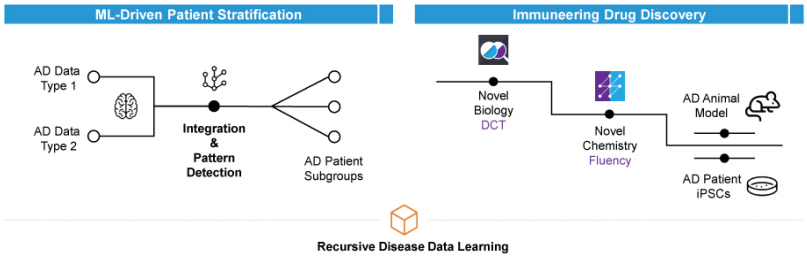
Our Approach to Alzheimer's Disease

We believe there are specific subgroups of AD that can be stratified through gene expression and brain pathology. To identify AD subgroups, we have leveraged our platform to employ a patient-centric, data-driven approach through:

- ***Patient Data***. Categorizing and quality controlling postmortem patient data available from multiple public repositories.
- ***Patient Stratification***. Using a combination of different types of data, such as brain pathology and gene expression, to stratify patients into certain groups.
- ***Our Expertise***. Leveraging our computational biology expertise to develop machine learning algorithms to detect patterns across biological data and find subgroups based on distinct patterns.

Our approach to stratify AD patients based off specific subgroups and discover therapies that may benefit these patients is depicted in the image below.

AD Patient Subgroup Stratification and Application of Our Drug Discovery Platform



We believe our platform and expertise in neurology and neuroscience has allowed us to determine biological differences in AD patients to help develop novel product candidates that have the potential to address the significant unmet needs of this underserved patient population. Through postmortem patient data, we have determined multiple subgroups of AD with varying degrees of neuropathology and cognitive deficiencies, differences in brain gene expression irrespective of β-amyloid or tau deposition, and inclusion or lack of high levels of gene expression resulting in neuroinflammation of the brain. We categorize the subgroup of patients with high levels of gene expression resulting in neuroinflammation of the brain as "Type I AD."

Through our next-generation approach for AD drug discovery (as depicted above), we have been able to develop a streamlined strategy for identifying novel product candidates by utilizing the following elements of our platform:

- ***Novel Biology***. Leveraging DCT to identify robust novel targets using gene expression signatures from each AD subgroup. Characterizing mechanisms of action in central nervous system, or CNS, cell types for target assessment.
- ***Novel Chemistry***. Employing our Fluency technology to accelerate the identification of small molecules that selectively bind to a target of interest.
- ***Proprietary Translational Planning.*** Utilizing the AD subgroup data that we have generated to select ideal preclinical models to improve clinical translation, including AD subgroup-specific induced pluripotent stem cell, or iPSC, lines, and defined existing and novel biomarkers specific to these patients.

By leveraging our data-driven discoveries, we believe we have a unique advantage to develop a targeted strategy for patient selection and to increase response rates by treating the underlying biology of the AD subgroups.

Our Neuroscience Pipeline

Our current neuroscience programs are dedicated to providing treatments for patients classified in a specific AD subgroup for which there are significant unmet needs and underserved patient populations. Our neuroscience programs are currently in the early stages of drug discovery and we are focused on advancing these programs into lead optimization. The following table summarizes our neuroscience pipeline:

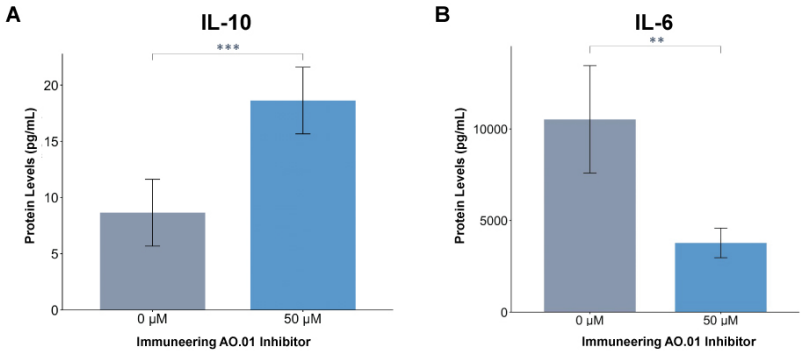
Our Neuroscience Programs—Rationale for Treating Neuroinflammation

We believe treating neuroinflammation in Type I AD patients will slow the progression of the disease. Previous academic studies have shown that neuroinflammation is a possible cause of AD pathology. In addition, other studies have determined that neuroinflammation is an early AD event that precedes β-amyloid and/or tau deposition in AD patients, and is necessary for AD patients to progress from mild cognitive symptoms to more severe cognitive impairment leading to diagnosis of AD. In a meta-analysis review of peripheral inflammatory markers in AD, an academic group reviewed 175 studies that enrolled over 26,000 patients and observed that AD patients have elevated inflammatory markers, including IL-1β and IL-6. In another study, IL-1β was associated with a faster rate of decline on executive functioning in older adults and IL-6 was associated with a faster decline of verbal memory. These observations are in agreement with our studies that identified subgroups of AD patients with elevated levels of neuroinflammatory gene expression. Collectively, through our own research and publicly available literature, we believe that treating neuroinflammation earlier in Type I AD patients may be able to slow the progression of the disease in these patients.

Our Solution: IMM-ALL-01

We are developing investigational small molecule inhibitors against an undisclosed target, or AO.01, for our IMM-ALL-01 program, which is currently in early stages of discovery. We believe that inhibition of AO.01 will decrease AD-related neuroinflammation by reducing the activation of microglia. Microglia are innate immune cells that have been observed to significantly increase AD-related neuroinflammation. Our preclinical studies in cultured microglia have demonstrated that 50 µM treatment with our AO.01 inhibitors decrease the release of IL-6 (as depicted in figure B below), an inflammatory marker that drives AD-related neuroinflammation, while promoting anti-inflammatory IL-10 expression (as depicted in figure A below).

***In Vitro* Observation of AO.01 Inhibitors Decreasing the Release of IL-6 and Promoting IL-10 Expression**



DCT revealed AO.01 as a target involved in AD-related neuroinflammatory mechanisms dysregulated in the brains of Type I AD patients. Through our bioinformatics analysis of independent study data, we observed that gene expression of AO.01 is significantly increased in activated microglia. In our *in vitro* studies, knockdown of AO.01 gene expression suppressed the neuroinflammatory behavior of primary microglia. Our RNAseq analysis of our internal microglia experiment confirmed reduced expression of neuroinflammatory pathway genes after AO.01 knockdown. Based on these studies, we observed that knockdown of AO.01 directly correlates with a decrease in neuroinflammatory markers. We further observed that knockdown of AO.01 gene expression decreased neuronal hyperphosphorylated tau deposition in a tau cell model. We believe this suggests that AO.01 inhibition may block multiple independent AD-related neuroinflammatory pathways by inhibiting and/or suppressing the release of neuroinflammatory markers, including IL-6, and decreasing tau deposition.

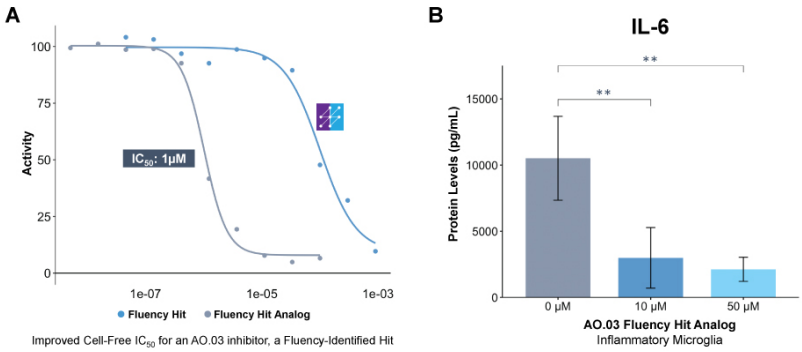
We plan to improve the *in vitro* potency of our AO.01 inhibitors by focusing on a resolved catalytic pocket of AO.01 to further reduce the proinflammatory activity of microglia. While our preliminary studies demonstrate

high cell permeability for our current AO.01 inhibitors, we plan to focus on optimizing blood brain barrier penetrance during lead optimization to provide desirable activity in the brain. Our goal is to increase translatability by exploring the effect of our AO.01 inhibitors on inflammation in human microglia derived from acquired iPSC lines of Type I AD patients.

Our Solution: IMM-ALL-03

We are developing investigational small molecule inhibitors against an undisclosed target, or AO.03, for our IMM-ALL-03 program, which is currently in the early stages of discovery. We leveraged Fluency to identify and rank initial hits against the AO.03 protein and screened a subset of hits with drug-like properties through a cell-free assay. The screening assays confirmed several Fluency hits from different chemical classes to AO.03, and subsequent modification of our AO.03 hits significantly improved inhibition of AO.03's activity (as depicted in figure A below). Our preclinical studies in activated microglia have demonstrated that 10 and 50 µM treatment with our AO.03 inhibitors decrease the release of IL-6 (as depicted in figure B below). In addition, in our preliminary studies, we have observed high cell permeability for our current AO.03 inhibitors. We plan to optimize blood brain barrier penetrance during lead optimization to provide desirable activity in the brain.

Fluency Platform Identifies Small Molecules Designed to Inhibit AO.03 and In Vitro Observation of AO.03 Inhibitors Decreasing the Release of IL-6

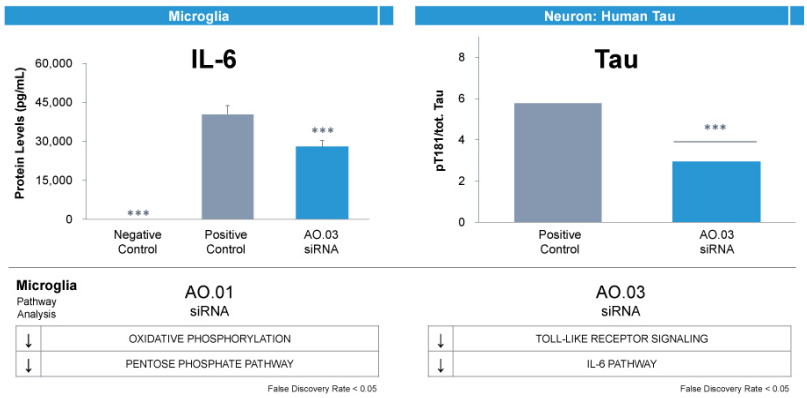


Improved Cell-Free IC_{50} for an AO.03 inhibitor, a Fluency-Identified Hit

Biological Relevance of AO.03

Through our platform, we have discovered that AO.03 is a target that is involved in aberrant inflammatory pathways in Type I AD pathogenesis, and that reduced AO.03 gene expression corrects the expression of genes related to Type I AD biology. In our *in vitro* studies, we observed that stimulation of microglia into a proinflammatory state triggered significant increases in AO.03 gene expression, whereas reduction of AO.03 gene expression had a causative effect in converting microglial behavior from a proinflammatory state to an anti-inflammatory state. Similar to AO.01, we also observed that lower AO.03 gene expression blocked neuronal tau deposition in a tau cell model, including phosphorylation of tau at a protein site called Threonine 181, or p181 (as depicted below). Based upon literature, there is strong evidence that p181 phosphorylation occurs early in AD progression and is positively correlated to the age of onset, suggesting early prevention of p181 phosphorylation may significantly delay AD symptoms. While *in vitro* analysis of stimulated microglia after AO.03 and AO.01 knockdown revealed non-identical, overlapping changes in cytokine release, RNAseq analyses have revealed that the targeted pathways of AO.03 and AO.01 are different. Concretely, reduction of AO.01 gene expression reduced expression of signaling genes for oxidation phosphorylation and the pentose phosphate pathway, whereas reduction of AO.03 gene caused a reduction of genes widely known to be involved in neuroinflammatory pathways in AD, including the IL-6 and toll-like receptor signaling pathways (as depicted below). We believe this represents unique opportunities for regulating several neuroinflammatory pathways in Type I AD patients.

The Biological Effect of Reducing AO.03 Gene Expression on Inflammation and Tau Deposition, and Pathway Analysis of AO.01 versus AO.03



Our Platform

Consistent with our approach of weaving bioinformatics and computational biology into every stage of the drug development process, we have developed a proprietary disease-agnostic platform that allows us to leverage human biological data to generate insights that are not constrained by the inherent limitations of conventional approaches or prevailing scientific views. We are developing novel product candidates that aim to optimize both safety and efficacy for diseases with high unmet medical needs and suboptimal treatment options. Key elements of our platform include:

- ***Insights from Human Data.*** Compare distinct groups of individuals who differ in a certain aspect of disease or response to a particular therapy, or identify new patient subsets.
- ***Novel Biology.*** Identify novel targets and new ways to drug existing targets using DCT and/or our insights into mechanisms of response.
- ***Novel Chemistry.*** Rapidly identify small molecules that selectively bind to a target of interest using our proprietary Fluency technology, and/or engineer PK to achieve optimal signaling dynamics.
- ***Proprietary Translational Planning.*** Use humanized preclinical models and bioinformatics to prioritize indications and identify sensitive subpopulations.

Underlying each of these elements is our rigorous quality control and ability to analyze complex biological datasets. We are one of the few biopharmaceutical companies that has been involved in defining best practices for robustly analyzing bioinformatics data, as evidenced by co-authorship on journal articles together with regulators as well as writing invited reviews to educate the scientific community on this topic. This attention to rigorous quality control pervades all of our analyses, and we believe this enables us to extract meaningful information from a variety of databases of human data, including GENIE and The Cancer Genome Atlas Program, or TCGA.

Our platform is not limited to a single aspect or pathology; rather, it is disease-agnostic, which we believe enables us to identify, develop and evaluate product candidates across multiple disease areas simultaneously, with our initial focus in oncology and neuroscience. While we currently have an emphasis on transcriptomic data, our platform is not limited to a single data type and thus we believe it will be able to evolve as new datasets emerge. Our platform enabled the initiation, discovery and development of our lead product candidate, IMM-1-104, and has led us to identify additional product candidates with novel compositions of matter by leveraging our platform and drug discovery process. Moreover, our platform has been applied extensively in successful partnerships with large pharmaceutical and biotechnology companies, and through our internal drug discovery and development.

Insights from Human Data

Our analyses often begin by comparing existing transcriptomic data from two groups of patients (e.g. from those whose tumors have metastasized versus those whose tumors have not) to help elucidate the biological mechanisms underlying a particular aspect of disease which we seek to counteract. As another example, we may analyze existing data from patients with differences in response to an existing therapy, in order to better understand what is happening in responders versus non-responders. We may also analyze existing data from patients with a disease to identify novel subsets of patients. Our platform has enabled us to conduct multiple projects that involve stratifying patients into novel subsets. We associate transcriptomic profiles with each subset, which can then be directly inputted into DCT to identify novel targets specific to a given patient subset.

Novel Biology

Disease Cancelling Technology

We have developed DCT to identify targets that reverse a disease signal across multiple relevant genes with the potential to yield product candidates with differentiated mechanisms that are less likely to be discovered by traditional drug discovery methods. Additional biologic context is derived from quantifying the extent to which different time points, concentrations and perturbations (e.g., inhibition and overexpression) may cancel a disease signal more effectively than existing drug targets. DCT ranks target perturbations by the extent to which they generate signals that counteract disease-associated gene expression changes observed in patient data. Thus, we believe DCT enables hypothesis-free, data-driven identification of novel targets and new ways to drug existing targets.

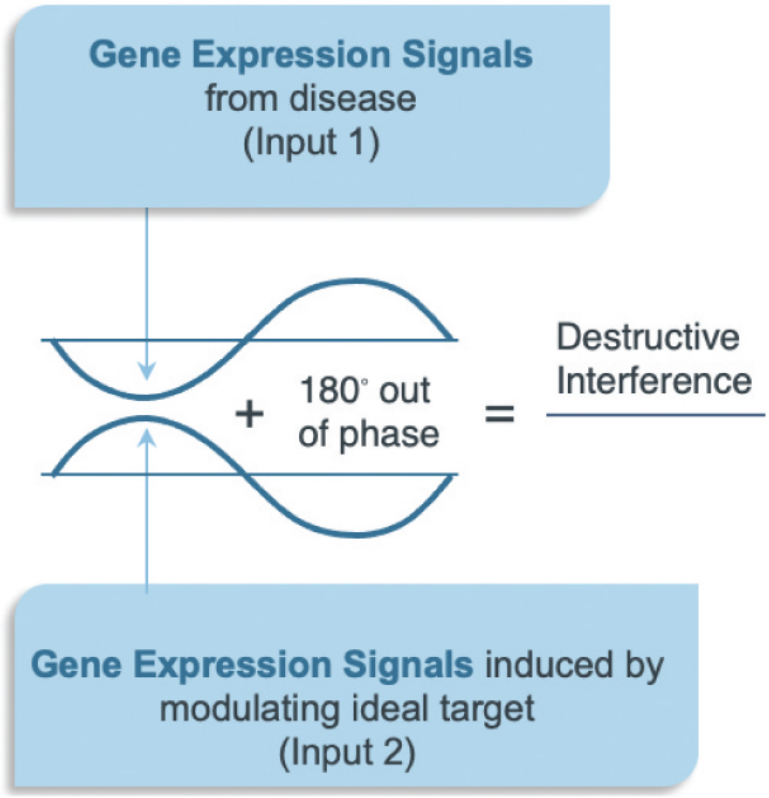
DCT leverages gene expression data derived from human patient samples to identify targets that may rescue abnormal gene expression and restore pathway homeostasis. In addition, DCT identifies biology relevant to attenuating a disease by quantifying the similarity of genome-wide signatures of specific aspects of the disease to signatures of target induced gene expression changes using a mathematical similarity metric. Uniquely, DCT quantifies the per-gene contribution to overall disease amplification or cancellation. An example of a typical analysis begins by running DCT to identify an unwanted, disease-specific gene expression pattern. The ideal input to DCT is focused on a specific aspect of a disease, such as tumors that have metastasized versus those that have not, rather than comparing diseased versus healthy states. DCT identifies target candidates by screening a disease differential expression signature and comparing it to thousands of target gene expression signatures.

DCT is able to rapidly compare disease state signatures against vast numbers of target signatures. DCT ranks signatures resulting from the modulation of specific targets by the extent to which they oppose disease signatures (as depicted below). Unlike some algorithms or artificial intelligence, or AI, approaches, the results originating from DCT are designed to be interpretable from a computational and biological perspective. This platform uses gene expression from patient datasets and does not rely on literature. Together with the target, DCT provides a specific list of testable genes associated with the target of interest, relevant drug concentrations and temporal dynamic information driving the result. Thus, we believe DCT can identify new targets and readily detect dynamic relevant biology relating to modulating a target in a better way.

A summary workflow for DCT's novel target identification can be described as follows:

- Carefully curated and quality controlled human transcriptomic data representing a specific aspect of disease, or Input 1, is input and vectorized for processing (as depicted below).
- A carefully curated and quality controlled library of gene expression signals associated with perturbing specific targets at specific time points and concentrations, or Input 2, is input and vectorized for processing (as depicted below). This library can potentially include clustered regularly interspaced short palindromic repeats, or CRISPR, RNA interference, tool compounds, screening library compounds and existing drugs.
- The strength of disease signal cancellation is measured between Input 1 and every target signature in Input 2.

Disease Cancelling Technology Summary Workflow for Target Identification



A second filtration step selects target candidates for which multiple biological pathways are restored in the proper direction compared to the disease signal. DCT includes a method to compute a per pathway contribution to disease canceling in terms of percent contribution to overall disease reversal for cases when a specific pathway is particularly relevant. DCT is designed to have many capabilities in addition to identifying novel targets or novel ways to drug existing targets. To enable rapid translation to experimental validation, DCT can suggest ideal concentrations, temporal dynamics and marker genes to monitor. DCT is also capable of predicting target combinations for a given disease or an ideal target for combination with an existing therapy. For expanded utility, DCT has a graphical user interface that enables our biologists to interact with, sort, modify, query and run results along with producing visualizations of results.

We believe DCT has several advantages over other target identification technologies. The platform uses patient data as a starting point, rather than artificial 2D *in vitro* models. For example, our neuroscience program uses gene expression data from AD patient subsets as an input to DCT. We have presented data at American Association for Cancer Research and other conferences demonstrating how cell lines fail to capture the heterogeneity of patient tumors, and our discovery team's experience in the 3D tumor modeling field has also highlighted the limitations of 2D *in vitro* data. Moreover, working closely with several FDA-approved drugs, we have found that transcriptomic data was most frequently and dynamically linked to drug activity. Thus, our core insights are derived from transcriptomic data (RNA), while some of our competitor's platforms may focus on sequencing data (DNA), imaging data from phenotypic screens and/or literature. DCT is focused on

identifying novel targets or novel ways to modulate existing targets, with the goal of generating novel therapeutics with improved clinical activity. We have not in-licensed external drugs and we do not focus on "drug repurposing" activities. Our pipeline is composed of programs with potentially novel pharmacological effects.

Biological Mechanisms of Response

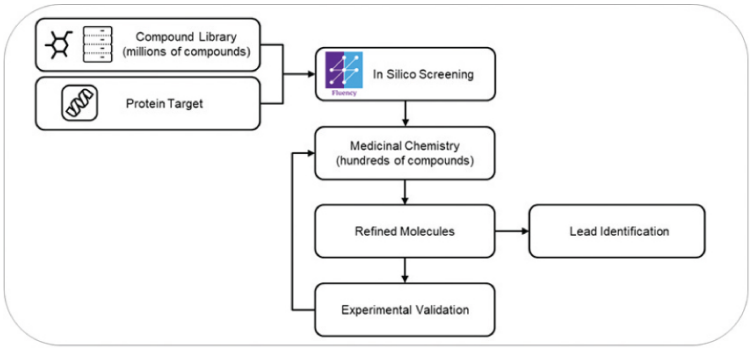
We also identify novel biology by applying translational bioinformatics to analyze the biological mechanisms of response of existing therapies. This may include comparing the transcriptional profiles induced by a drug at different timepoints in order to highlight biological feedback loops that we then seek to counteract.

Novel Chemistry

Fluency

We developed Fluency, an easy-to-use AI-based tool, to allow for the rapid screening of large compound libraries for potential binders to a protein target of interest. Fluency can be run with any compound library, including libraries containing millions of compounds. It identifies the most attractive drug candidates within a library by making ranked predictions of binding affinity for all compounds. It also makes predictions about the target binding location for all compounds, which allows us to filter the library for drug candidates that are the most likely to affect a specific region of interest on the desired target. Fluency accelerates our drug development process by allowing us to go from millions of potential compounds down to what Fluency selects as the best hundred drug candidates within a single work day. This allows us to quickly advance only those select candidates to medicinal chemistry and experimental validation (as depicted below), increasing our capital efficiency. Knowledge of the 3D structure of the protein target of interest is not required, which expands the applicability of Fluency to include targets with poorly defined or non-existent 3D structures.

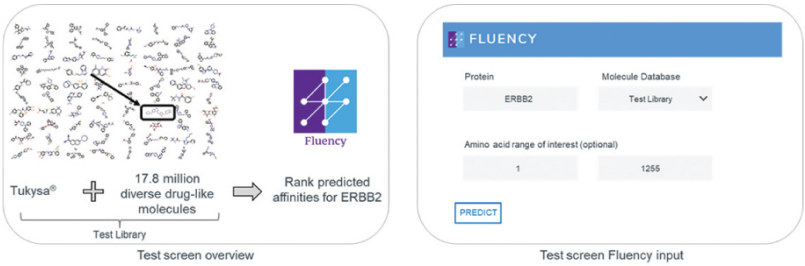
Fluency Accelerates Our Drug Discovery



To illustrate both the ease of use, as well as the power of Fluency to identify promising drug candidates, we constructed a test screen of Tukysa® (tucatinib), a recently FDA-approved drug for the treatment of advanced breast cancer in combination with trastuzumab and capecitabine. Tukysa® is a tyrosine kinase inhibitor of human epidermal growth factor receptor 2, or HER2 (also referred to as ERBB2). We created a test compound library by placing Tukysa® in a diverse chemical library of 17.8 million drug-like molecules and evaluated whether or not Fluency could identify it as a promising drug candidate against ERBB2 (depicted in the first panel below). The binding models within Fluency were trained against millions of carefully quality controlled, publicly available binding affinity measurements for compounds against thousands of proteins. However, because Fluency did not see Tukysa® or other molecules highly similar to Tukysa® during training, it did not know whether or not it was a promising candidate before the test screen was run. In our test screens, we input the protein of interest into Fluency, then select a library to screen, and optionally enter the region of interest

within the protein (depicted in the second panel below). In the test screen for Tukysa®, we screened the test library against all amino acids within ERBB2.

Fluency Test Screen Input Example

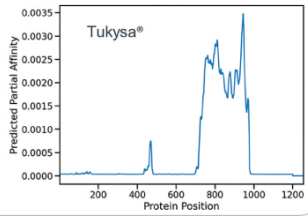


Fluency rapidly screened approximately 17.8 million compounds in less than 7 hours and identified Tukysa® as the best binder to ERBB2 along with a number of other potential candidates (as depicted below). Fluency's location prediction for this compound points towards the kinase domain of ERBB2 which contains the binding site. Referring back to our drug discovery flow chart depicted above, Tukysa® would have been amongst the hundreds of compounds to go on to medicinal chemistry and experimental validation if we were searching for general ERBB2 binders or if we were searching for potential binders specific to the kinase domain.

Fluency Test Screen Output Example

ERBB2 binding affinity predictions

Rank	Compound	Predicted Binding Affinity
1	Tukysa®	73.1 nM
2	Compound 2	73.8 nM
3	Compound 3	76.2 nM
4	Compound 4	92.0 nM
5	Compound 5	97.7 nM
...	...	...
17.8 million	Compound 17.8 million	30,500 nM



Fluency has been used to screen for potential drug candidates within our early-stage oncology and neuroscience programs. We have a dedicated team of AI experts who continue to evolve Fluency and are embedded in our end-to-end preclinical drug development processes. We continue to seek new ways to apply our AI expertise to develop novel product candidates and potentially improve the lives of patients.

Signaling Dynamics (PK-Driven)

Transcriptomic data has proven critical to these analyses because it provides an understanding of the extent to which specific genes are expressed at any given time, capturing temporal changes in pathway activation. Signaling networks differ between cell types, and we leverage this to modulate targets in such a way that certain cell types will be more impacted than others. Our platform enables us to assess the signaling dynamics of product candidates, which we believe allows us to optimize the chemistry of our product candidate programs to achieve broad therapeutic activity against diseased cells while sparing healthy normal cells. Modulation of these signaling networks impacts cell fate decisions in many cell types, including cancerous cells. Our computational biology expertise enables us to analyze transcriptomic data that closely reflects spatiotemporal dynamics of biological signaling networks.

Proprietary Translational Planning

Humanized Models. In oncology, we are deeply experienced in advanced, humanized 3D-based tumor growth models, which based on peer reviewed research by members of our team and others, more accurately predict drug response in animal models, and we believe in patients, compared to standard models. Unlike *in vitro* approaches, the 3D tumor growth models reflect the complexity of tumor biology given their alignment with the TME. Thus, we believe our deep expertise in 3D tumor models enables us to more accurately stratify patients likely to benefit from our potential product candidates. In neuroscience, we similarly seek to use human iPSC based models that more faithfully represent the biology of a heterogeneous patient population than more traditional cell lines.

Prioritize Indications and Identify Sensitive Subpopulations. We are able to leverage bioinformatics to analyze genomic data from large patient databases to identify specific indications where the majority of patients have characteristics that align with our more reflective humanized models, and identify biological mechanisms and biomarkers that enable us to identify subpopulations that are more likely to be sensitive based on their similarity to our translational approaches.

Our Platform and its Role in the IMM-1-104 Program

Our platform played a key role in creating the most important characteristics of our lead product candidate, IMM-1-104. In the early stages of the program, insights from human data were used to identify transcriptional profiles we aimed to counteract. DCT and our analysis of mechanisms of existing drugs led us to identify what we believe to be novel biology, specifically new ways to drug an existing target, to highlight the goal of counteracting a biologic feedback loop. Novel chemistry was generated to counteract the feedback loop, and the PK was tuned to generate optimal signaling dynamics (deep but cyclic interruptions of the pathway) as confirmed for translational profiling. Our proprietary translational planning has involved profiling IMM-1-104 in a large number of 3D models to identify the types of cancer (and biomarkers of subsets when needed) that we believe will have the highest probability of success in the clinic. Together, these insights enabled us to demonstrate in an *in vitro* model that a drug with feedback loop resistance combined with a short half-life was able to move toward *in vivo* improvements in key efficacy metrics and tolerability through modulation of tumor cell signaling dynamics.

Early in the program, we utilized human data to generate translational profiles specific to cancer patients experiencing cachexia, which causes extreme weight loss and muscle wasting. DCT was then utilized to identify targets and intervention time points, otherwise known as biological perturbations, that could counteract cachexia. Among the highest ranked perturbations were multiple MEK, inhibitors, but only the gene expression profiles induced by these MEK inhibitors at early time points (i.e., at 3 and 6 hours) were ranked highly for cancelling the disease-associated signals according to our technology. In contrast, the gene expression signals induced by MEK inhibitors at a later time point (i.e., at 24 hours) amplified or mimicked the transcriptomic signatures associated with diseases. These findings pointed to the importance of a feedback loop in the MAPK pathway called the CRAF-bypass, which may lead to resistance of MEK inhibition, and highlighted the critical importance of designing IMM-1-104 to potentially counteract the CRAF-bypass.

We next applied our platform's ability to characterize mechanisms of response by generating transcriptomic (RNA sequencing) data evaluating the impact of a recently approved MEK inhibitor, selumetinib, relative to vehicle in $KRAS^{G12D}$ tumor-bearing BALB/c mice, which are inbred, albino and immunodeficient mice ordinarily used in research models for cancer therapy. The BALB/c mice were orally administered 100 mg/kg of selumetinib twice a day for 18 days. Notably, when we examined a set of genes known to be downstream of ERK and activated by the MAPK pathway, we saw reduced downregulation of the pathway following selumetinib treatment. There was very little difference between the degree of MAPK pathway downregulation at the 2 hour time point and the 12 hour time point, demonstrating that the inhibition achieved by a typical MEK inhibitor with a non-zero drug trough was both static and limiting in a chronic setting. This focused us on the need to develop IMM-1-104 with novel chemistry, specifically a short half-life to achieve deep cyclic inhibition. Through the medicinal chemistry process, we were able to conduct similar analyses to assess the impact of varying PK profiles on signaling dynamics, and when we conducted the same analysis with IMM-1-104 in the model referenced above, we observed much stronger downregulation at the 2 hour time point followed by a return to baseline at the 12 hour time point. These observed results confirm that we achieved the desired signaling dynamics of cycles of deep inhibition and release of the MAPK pathway.

We are utilizing our platform's proprietary translational planning capabilities by evaluating IMM-1-104 in a large panel of 3D tumor models, and then applying our ability to robustly analyze challenging datasets to assess genomic data from the GENIE cohort to prioritize indications for IMM-1-104 and identify biomarkers of response, when needed. We believe this analysis will enable us to identify substantial translational opportunities for additional indications.

Our Platform and Our Early-Stage Oncology Pipeline

We utilize Fluency, the novel chemistry element of our platform, to rapidly identify small molecule hits for a targeted region of a protein for many of the earlier stage programs in our oncology pipeline. Fluency is being utilized to accelerate the advancement of our RAS and PI3K-alpha programs. In addition, these earlier stage programs also utilize our platform's ability to generate novel biology by characterizing mechanisms of response to address these targets in new ways. In the case of our RAS modulators, this involves targeting the process of RAS dimerization. Finally, we are also leveraging novel chemistry in the form of PK changes with the goal of achieving optimal signaling dynamics and deep cyclic inhibition to maximize therapeutic activity in broad populations while improving tolerability. We plan to evaluate each of our programs in humanized 3D models and leverage bioinformatics to prioritize indications and identify sensitive patient subgroups.

Our Platform and Our Neuroscience Programs

Our neuroscience programs began with our platform's ability to identify insights from human data, specifically by methodically analyzing challenging datasets by assessing the robustness of various publicly available AD datasets. Given the lack of disease-modifying therapies and AD patient heterogeneity, robust analysis of data is a motivating factor to drive our success in this space. We applied our platform's capability to stratify patients into previously undiscovered subsets, identifying new subpopulations of AD patients with strikingly different molecular biology and distinct gene expression profiles. We then applied our platform's ability to identify novel biology by leveraging DCT to identify and rank novel targets for specific subsets of AD patients. Two of these undisclosed AD targets, AO.01 and AO.03, have been identified *in vitro* and have gone on to become the focus of our two lead neuroscience programs, IMM-ALL-01 and IMM-ALL-03, respectively. Once those targets had been identified and experimentally confirmed, we utilized Fluency to rapidly identify small molecules that are designed to selectively bind to the targets, and such selective binding has since been observed *in vitro*. We also leveraged our platform's capabilities for characterizing mechanisms of response to assess the biological impact of those hits, and we are preparing for proprietary translational planning by using iPSC models to confirm the differences in response we expect to see in specific AD patient subgroups.

Competition

The pharmaceutical and biotechnology industries are characterized by rapid advancement of novel technologies, significant competition and a strong defense of intellectual property rights. While we believe that our proprietary platform and scientific expertise provides us with competitive advantages, we face competition from multiple sources, including larger and better-funded pharmaceutical and biotechnology companies, academic institutions, governmental agencies and public and private research institutions. Any product candidates that we successfully develop and commercialize will compete with currently approved therapies and new therapies that may become available in the future. Key factors that would affect our ability to effectively compete with other therapeutics include safety, efficacy, ease of administration, pricing, brand recognition and availability of reimbursement and coverage by third party payors.

Our Oncology and Neuroscience Programs

The current FDA-approved treatment options that target MAPK pathway cancers are either MEK inhibitors limited by their high rates of serious drug-related adverse events that result in drug intolerability and drug resistance through MAPK-feedback loops, or KRAS inhibitors limited to patients with specific KRAS mutations. We expect that our oncology programs targeting the MAPK pathway may compete with current FDA-approved therapies or clinical programs targeting KRAS mutant tumors that are being advanced by certain pharmaceutical and biotechnology companies.

There are currently only five FDA-approved treatments for AD, and these treatments are widely considered to only briefly and modestly improve AD symptoms, ultimately failing to prevent or slow disease progression.

We expect that our neuroscience programs that are initially focused on treating neuroinflammation in AD may compete with products or programs being advanced by certain pharmaceutical and biotechnology companies.

Intellectual Property

Our ability to obtain and maintain intellectual property protection for our products and technology is fundamental to the long-term success of our business. We rely on a combination of intellectual property protection strategies, including patents, trademarks, copyrights, trade secrets, license agreements, confidentiality policies and procedures, non-disclosure agreements,invention assignment agreements and technical measures designed to protect the intellectual property and confidential information and data used in our business.

As of March 31, 2021, we have: two pending U.S. patent applications; and one Patent Cooperation Treaty, or PCT, application that has not entered national stage. These patents and patent applications relate to subject matter, including: our lead product candidate, IMM-1-104, our DCT, and Fluency. Excluding any possible patent term adjustments or extensions and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees, as applicable: any patents that may issue from our owned pending U.S. patent applications are expected to expire in February, 2039; and any patents that may issue from our owned pending foreign patent applications or PCT applications are expected to expire in January, 2041.

With respect to IMM-1-104, as of March 31, 2021, we have one pending PCT application; this application has not yet entered the national stage. The pending claims of this PCT application are directed to compounds, pharmaceutical compositions, and methods of use. Any patent that may issue, based upon this pending PCT application related to IMM-1-104, is expected to expire in January, 2041, excluding any possible patent term adjustments or extensions and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees, as applicable.

With respect to our DCT, as of March 31, 2021, we have one pending U.S. patent application. The pending claims of this U.S. patent application are directed to methods (processes) and systems. Any patent that may issue from our pending patent application related to our DCT is expected to expire in February, 2039, excluding any possible patent term adjustments or extensions and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees, as applicable.

With respect to Fluency, as of March 31, 2021, we have one pending U.S. patent application. The pending claims of this U.S. patent application are directed to methods (processes) and systems. Any patent that may issue from our pending patent application related to Fluency is expected to expire in February, 2039, excluding any possible patent term adjustments or extensions and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees, as applicable.

The term of individual patents depends upon the legal term for patents in the countries in which they are granted. In most countries, including the United States, the patent term is 20 years from the earliest claimed filing date of a non-provisional patent application in the applicable country. In the United States, a patent's term may, in certain cases, be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the USPTO in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over a commonly owned patent or a patent naming a common inventor and having an earlier expiration date. We cannot be sure that our pending patent applications that we have filed or may file in the future will result in issued patents, and we can give no assurance that any patents that have issued or might issue in the future will protect our current or future products, will provide us with any competitive advantage, and will not be challenged, invalidated, or circumvented.

In the United States, the patent term of a patent that claims an FDA-approved drug or biologic may also be eligible for patent term extension, which permits patent term restoration as compensation for the patent term lost during FDA regulatory review process. The Hatch-Waxman Act permits a patent term extension of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time that the drug or biologic is under regulatory review. Patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug or biologic may be extended. Similar provisions are available in the EU and certain other foreign jurisdictions to extend the term of a patent that covers an approved drug or biologic. In the future, if

any drug candidates that we may develop receive FDA approval, we expect to apply for patent term extensions where applicable on patents covering those drugs. We plan to seek patent term extensions to any of our future issued patents in any jurisdiction where these are available. However, there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether these extensions should be granted, and if granted, the length of these extensions.

We intend to pursue additional intellectual property protection to the extent we believe it would be beneficial and cost-effective. Our ability to stop third parties from making, using or commercializing any of our patented inventions will depend in part on our success in obtaining, defending and enforcing patent claims that cover our technology, inventions, and improvements. With respect to our intellectual property, we cannot provide any assurance that any of our current or future patent applications will result in the issuance of patents in any particular jurisdiction, or that any of our current or future issued patents will effectively protect any of our products or technology from infringement or prevent others from commercializing infringing products or technology.

In addition to our reliance on patent protection for our inventions, products, and technologies, we also seek to protect our brand through the procurement of trademark rights. As of March 31, 2021, we have certain trademark registrations and pending applications for trademark registration, for the marks DISEASE CANCELLING and IMMUNEERING in the United States and/or certain foreign jurisdictions. Furthermore, we rely on trade secrets, know-how, unpatented technology and other proprietary information, to strengthen our competitive position. We have determined that certain technologies, including some of our software, are better protected as trade secrets. To mitigate the possibility of trade secret misappropriation, we enter into non-disclosure and confidentiality agreements with parties who have access to our trade secrets, such as our employees, consultants, advisors and other third parties. We also enter into invention assignment agreements with our employees and consultants that obligate them to assign to us any inventions they have developed while working for us. We generally control access to our proprietary and confidential information through the use of internal and external controls that are subject to periodic review. Although we take steps to protect our proprietary information and trade secrets, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. As a result, we may not be able to meaningfully protect our trade secrets. For further discussion of the risks relating to intellectual property, see the section titled “Risk Factors—Risks Related to Our Intellectual Property.”

Government Regulation

Among others, the FDA, U.S. Department of Health and Human Services Office of Inspector General, the Centers for Medicare and Medicaid Services and comparable regulatory authorities in state and local jurisdictions and in other countries impose substantial and burdensome requirements upon companies involved in the preclinical and clinical development, manufacture, marketing and distribution of drugs such as those we are developing. These agencies and other federal, state and local entities regulate, among other things, the research and development, testing, manufacture, quality control, safety, effectiveness, labeling, packaging, storage, record keeping, approval, sales, commercialization, marketing, advertising and promotion, distribution, post-approval monitoring and reporting, sampling and export and import of our product candidates. Any drug candidates that we develop must be approved by the FDA before they may be legally marketed in the United States and by the appropriate foreign regulatory agency before they may be legally marketed in those foreign countries. Generally, our activities in other countries will be subject to regulation that is similar in nature and scope as that imposed in the United States, although there can be important differences. Additionally, some significant aspects of regulation in the European Union, or EU, are addressed in a centralized way, but country-specific regulation remains essential in many respects.

U.S. Drug Development Process

In the United States, the FDA regulates drugs under the federal Food, Drug, and Cosmetic Act, or the FDCA, and its implementing regulations. The process required by the FDA before a drug may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests, animal studies and formulation studies in accordance with FDA’s good laboratory practice requirements and other applicable regulations;

- submission to the FDA of an IND which must become effective before human clinical trials may begin;
- approval by an independent institutional review board, or IRB, or ethics committee at each clinical site before each trial may be initiated;
- performance of adequate and well-controlled human clinical trials in accordance with good clinical practice, or GCP, requirements to establish the safety and efficacy of the proposed drug for its intended use;
- submission to the FDA of a New Drug Application, or NDA, after completion of all pivotal trials;
- payment of user fees associated with an NDA;
- a determination by the FDA within 60 days of its receipt of an NDA to file the NDA for review;
- satisfactory completion of an FDA advisory committee review, if applicable;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the drug is produced to assess compliance with current good manufacturing practice, or cGMP, requirements to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity, and of selected clinical investigation sites to assess compliance with GCPs;
- potential FDA audit of the preclinical and/or clinical trial sites that generated the data in support of the NDA, and
- FDA review and approval of the NDA to permit commercial marketing of the product for particular indications for use in the United States.

Prior to beginning the first clinical trial with a product candidate in the United States, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. Some preclinical testing may continue even after the IND is submitted. The IND also includes results of animal and in vitro studies assessing the toxicology, PK, pharmacology, and PD characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site and must monitor the study until completed. An IRB is charged with protecting the welfare and rights of trial participants and considers such items as whether the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the informed consent form that must be provided to each clinical trial subject or his or her legal representative and must monitor the clinical trial until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of

efficacy. There are also requirements governing the reporting, under certain timelines, of ongoing clinical studies and clinical study results to public registries, specifically the clinicaltrials.gov website managed by the National Institutes of Health.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1: The product candidate is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness. In the case of some products for severe or life-threatening diseases, such as cancer, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.
- Phase 2: The product candidate is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages, dose tolerance and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3: The product candidate is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval. Generally, two adequate and well-controlled Phase 3 clinical trials are required by the FDA for approval of an NDA.

Post-approval trials, sometimes referred to as Phase 4 studies, may be conducted after initial marketing approval. These trials are used to gain additional experience from the treatment of patients in the approved indication. In certain instances, such as with accelerated approval drugs, the FDA may mandate the performance of Phase 4 trials as a condition of approval of an NDA.

The FDA or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to patients. In addition, some clinical trials are overseen by an independent group of qualified experts organized by the sponsor, known as a data safety monitoring board or committee. Depending on its charter, this group may determine whether a trial may move forward at designated check points based on access to certain data from the trial.

A sponsor may choose, but is not required, to conduct a foreign clinical study under an IND. When a foreign clinical study is conducted under an IND, all IND requirements must be met unless waived. When the foreign clinical study is not conducted under an IND, the sponsor must ensure that the study complies with certain FDA regulatory requirements in order to use the study as support for an IND or application for marketing approval. Specifically, the FDA has promulgated regulations governing the acceptance of foreign clinical trials not conducted under an IND, establishing that such studies will be accepted as support for an IND or application for marketing approval if the study was conducted in accordance with GCP, including review and approval by an independent ethics committee, or IEC, and use of proper procedures for obtaining informed consent from subjects, and the FDA is able to validate the data from the study through an on-site inspection if the FDA deems such inspection necessary. The GCP requirements encompass both ethical and data integrity standards for clinical studies. 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. They further help ensure that non-IND foreign studies are conducted in a manner comparable to that required for IND studies. If a marketing application is based solely on foreign clinical data, the FDA requires that the foreign data be applicable to the U.S. population and U.S. medical practice; the studies must have been performed by clinical investigators of recognized competence; and the FDA must be able to validate the data through an on-site inspection or other appropriate means, if the FDA deems such an inspection to be necessary.

During the development of a new drug, sponsors are given opportunities to meet with the FDA at certain points. These points are generally prior to submission of an IND, at the end of Phase 2, and before an NDA is submitted. Meetings at other times may be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice, and for the sponsor to obtain the FDA's feedback on the next phase of development. Sponsors typically use the meetings at the end of the Phase 2 trial to discuss Phase 2 clinical results and present plans for the pivotal Phase 3 clinical trials that they believe will support approval of the new drug.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the drug and finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the manufacturer must develop methods for testing the identity, strength, quality and purity of the final drug. In addition, 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.

While the IND is active and before approval, progress reports summarizing the results of the clinical trials and nonclinical studies performed since the last progress report must be submitted at least annually to the FDA, and written IND safety reports must be submitted to the FDA and investigators for serious and unexpected suspected adverse events, findings from other studies suggesting a significant risk to humans exposed to the same or similar drugs, findings from animal or *in vitro* testing suggesting a significant risk to humans, and any clinically important increased incidence of a serious suspected adverse reaction compared to that listed in the protocol or investigator brochure.

U.S. Review and Approval Process

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, preclinical and other non-clinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling and other relevant information are submitted to the FDA as part of an NDA requesting approval to market the product. Data may come from company-sponsored clinical trials intended to test the safety and effectiveness of a use of a product, or from a number of alternative sources, including studies initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and effectiveness of the investigational drug product to the satisfaction of the FDA. The submission of an NDA is subject to the payment of substantial user fees; a waiver of such fees may be obtained under certain limited circumstances. Additionally, no user fees are assessed on NDAs for products designated as orphan drugs, unless the product application also includes a non-orphan indication.

The FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use and whether its manufacturing is cGMP-compliant to assure and preserve the product's identity, strength, quality and purity. Under the Prescription Drug User Fee Act, or PDUFA, guidelines that are currently in effect, the FDA has a goal of ten months from the date of "filing" of a standard NDA for a new molecular entity to review and act on the submission. This review typically takes twelve months from the date the NDA is submitted to the FDA because the FDA has approximately two months to make a "filing" decision after it the application is submitted. The FDA conducts a preliminary review of all NDAs within the first 60 days after submission, before accepting them for filing, to determine whether they are sufficiently complete to permit substantive review. The FDA may request additional information rather than accept an NDA for filing. In this event, the NDA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing.

The FDA may refer an application for a novel drug to an advisory committee. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides 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.

Before approving an NDA, 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 and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCPs. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates an NDA, it will issue an approval letter or a Complete Response Letter. An approval letter authorizes commercial marketing of the drug with prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete, and the application will not be approved in its present form. A Complete Response Letter usually describes the specific deficiencies in the NDA identified by the FDA and may require additional clinical data, such as an additional pivotal Phase 3 trial or other significant and time-consuming requirements related to clinical trials, nonclinical studies or manufacturing. If a Complete Response Letter is issued, the sponsor must resubmit the NDA, addressing all of the deficiencies identified in the letter, or withdraw the application. Even if such data and information are submitted, the FDA may decide that the NDA does not satisfy the criteria for approval.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may contain limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the NDA with a Risk Evaluation and Mitigation Strategy, or REMS, to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a medicine and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries, and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may also require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies. In addition, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could impact the timeline for regulatory approval or otherwise impact ongoing development programs.

The Pediatric Research Equity Act, or PREA, requires a sponsor to conduct pediatric clinical trials for most drugs, for a new active ingredient, new indication, new dosage form, new dosing regimen, or new route of administration. Under PREA, original NDAs and supplements must contain a pediatric assessment unless the sponsor has received a deferral or waiver. The required assessment must evaluate the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The sponsor or the FDA may request a deferral of pediatric clinical trials for some or all of the pediatric subpopulations. A deferral may be granted for several reasons, including a finding that the drug is ready for approval for use in adults before pediatric clinical trials are complete or that additional safety or effectiveness data needs to be collected before the pediatric clinical trials begin.

Orphan Drug Designation and Exclusivity

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug intended to treat a rare disease or condition, which is a disease or condition that affects fewer than 200,000 individuals in the United States or, if it affects more than 200,000 individuals in the United States, there is no reasonable expectation that the cost of developing and making a drug product available in the United States for this type of disease or condition will be recovered from sales of the product. Orphan designation must be requested before submitting an NDA. After the FDA grants orphan designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug or biological product for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan exclusivity (i.e., greater safety, greater efficacy, or a major contribution to patient care) or inability to manufacture the product in sufficient quantities. The designation of such drug also entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. Competitors, however, may receive approval of different products for the indication for which the orphan product has exclusivity or obtain approval for the same product but for a different indication for which the orphan product has exclusivity. Orphan exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval of the same drug as defined by the FDA or if our product candidate is determined to be contained within the competitor's product for the same indication or disease, and we are unable to demonstrate that our product is clinically superior to the competitor product. If an orphan designated product receives marketing approval for an indication broader than what is designated, it may not be entitled to orphan exclusivity. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Expedited Development and Review Programs

The FDA has a number of programs intended to expedite the development or review of products that meet certain criteria. Sponsors may request that FDA allow the use of one or more of these expedited pathways. For example, new drugs are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a fast track product has opportunities for more frequent interactions with the review team during product development, and the FDA may consider for review sections of the NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA.

Any product submitted to the FDA for approval, including a product with a fast track designation, may also be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A product is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new drug designated for priority review in an effort to facilitate the review. The FDA endeavors to review applications with priority review designations within six months of the filing date as compared to ten months for review of new molecular entity NDAs under its current PDUFA review goals.

In addition, a product may be eligible for accelerated approval. Drug products intended to treat serious or life-threatening diseases or conditions may be eligible for accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require that a sponsor of a drug receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. The FDA may withdraw accelerated approval if, among other things, the confirmatory study fails to verify clinical benefit; the applicant fails to perform required confirmatory studies with due diligence; postmarketing use demonstrates that postmarketing restrictions are inadequate to assure safe use; the applicant fails to adhere to agreed-upon postmarketing restrictions; promotional materials are false or misleading; or, other evidence demonstrates that the product is not shown to be safe or effective under its conditions of use. In addition, the FDA currently requires pre-approval of promotional materials as a condition for accelerated approval, which could adversely impact

the timing of the commercial launch of the product. Drugs granted accelerated approval must meet the same statutory standards for safety and effectiveness as those granted traditional approval.

The Food and Drug Administration Safety and Innovation Act established a category of drugs referred to as "breakthrough therapies" that may be eligible to receive breakthrough therapy designation. A sponsor may seek FDA designation of a product candidate as a "breakthrough therapy" if the product is intended, 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, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance. The breakthrough therapy designation is a distinct status from both accelerated approval and priority review, which can also be granted to the same drug if relevant criteria are met. If a product is designated as breakthrough therapy, the FDA will work to expedite the development and review of such drug.

Fast track designation, breakthrough therapy designation, priority review, and accelerated approval do not change the standards for approval, but may expedite the development or approval process. Even if a product 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. We may explore some of these opportunities for our product candidates as appropriate.

Post-Approval Requirements

Any products manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual program fees for any marketed products. Drug manufacturers and their subcontractors are required to 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 cGMP, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. 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, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw 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 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 studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters, or untitled letters;
- clinical holds on clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- 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;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

The FDA also may require post-marketing testing, known as Phase 4 testing, and surveillance to monitor the effects of an approved product. Discovery of previously unknown problems with a product or the failure to comply with applicable FDA requirements can have negative consequences, including adverse publicity, judicial or administrative enforcement, warning letters from the FDA, mandated corrective advertising or communications with doctors, and civil or criminal penalties, among others. Newly discovered or developed safety or effectiveness data may require changes to a product's approved labeling, including the addition of new warnings and contraindications, and also may require the implementation of other risk management measures

The FDA closely regulates the marketing, labeling, advertising and promotion of drug products. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, untitled or warning letters, requirements to conduct corrective advertising and potential civil and criminal penalties. Physicians may prescribe, in their independent professional medical judgment, legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products. The federal government has levied large civil and criminal fines against companies for alleged improper promotion of off-label use and has enjoined companies from engaging in off-label promotion. The FDA and other regulatory agencies have also required that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA-approved labeling.

In addition, the distribution of prescription pharmaceutical products is subject to the Prescription Drug Marketing Act, or PDMA, which regulates the distribution of drugs and drug samples at the federal level, and sets minimum standards for the registration and regulation of drug distributors by the states. Both the PDMA and state laws limit the distribution of prescription pharmaceutical product samples and impose requirements to ensure accountability in distribution.

Marketing Exclusivity

Market exclusivity provisions under the FDCA can delay the submission or the approval of certain marketing applications. The FDCA provides a five-year period of non-patent exclusivity within the United States to the first applicant to obtain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. During the exclusivity period, the FDA may not approve or even accept for review an abbreviated new drug application, or ANDA, or an NDA submitted under Section 505(b)(2), or 505(b)(2) NDA, submitted by another company for another drug based on the same active moiety, regardless of whether the drug is intended for the same indication as the original innovative drug or for another indication. However, such an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement to one of the patents listed with the FDA by the innovator NDA holder.

The FDCA alternatively provides three years of marketing exclusivity for an NDA, or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the

modification for which the drug received approval on the basis of the new clinical investigations and does not prohibit the FDA from approving ANDAs or 505(b)(2) NDAs for drugs containing the active agent for the original indication or condition of use. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to any preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Pediatric exclusivity is another type of marketing exclusivity available in the United States. Pediatric exclusivity provides for an additional six months of marketing exclusivity attached to another period of exclusivity if a sponsor conducts clinical trials in children in response to a written request from the FDA. The issuance of a written request does not require the sponsor to undertake the described clinical trials. In addition, orphan drug exclusivity, as described above, may offer a seven-year period of marketing exclusivity, except in certain circumstances.

Other Healthcare Laws

Pharmaceutical companies like us 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. Such regulation may constrain the financial arrangements and relationships through which we research, develop, and ultimately, sell, market and distribute any products for which we obtain marketing approval. Such laws include, without limitation, federal and state anti-kickback, fraud and abuse, and false claims laws, such as the federal Anti-Kickback Statute and the federal Civil False Claims Act, as well as federal and state data privacy and security laws and regulations, and transparency laws and regulations addressing drug pricing and payments and other transfers of value made by pharmaceutical manufacturers to physicians and other healthcare providers, such as the federal Physician Payment Sunshine Act. Violations of any of such laws or any other governmental regulations that apply may result in significant penalties, including, without limitation, administrative, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of operations, integrity oversight and reporting obligations to resolve allegations of noncompliance, exclusion from participation in federal and state healthcare programs, such as Medicare and Medicaid, and imprisonment.

Coverage and Reimbursement

Sales of any pharmaceutical product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance and managed healthcare organizations, and the level of reimbursement for such product by third-party payors. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. These third-party payors are increasingly reducing coverage and reimbursement for medical products, drugs and services. In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product. Decreases in third-party reimbursement for any product or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product and also have a material adverse effect on sales.

Moreover, as a condition of participating in, and having products covered under, certain federal healthcare programs, such as Medicare and Medicaid, we may become subject to federal laws and regulations that require pharmaceutical manufacturers to calculate and report certain price reporting metrics to the government, such as Medicaid Average Manufacturer Price, or AMP, and Best Price, Medicare Average Sales Price, the 340B Ceiling Price, and Non-Federal AMP reported to the Department of Veteran Affairs, and with respect to Medicaid, pay statutory rebates on utilization of manufacturers' products by Medicaid beneficiaries. Compliance with such laws and regulations will require significant resources and may have a material adverse effect on our revenues.

Healthcare Reform

In the United States, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, each as amended, collectively known as the ACA, was enacted,

which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly affected the pharmaceutical industry. The ACA contained a number of provisions, including those governing enrollment in federal healthcare programs, reimbursement adjustments and changes to fraud and abuse laws. For example, the ACA:

- increased the minimum level of Medicaid rebates payable by manufacturers of brand name drugs from 15.1% to 23.1% of the AMP;
- required collection of rebates for drugs paid by Medicaid managed care organizations;
- expanded beneficiary eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to certain individuals with income at or below 138% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expanded the types of entities eligible for the 340B Drug Pricing Program;
- required manufacturers to participate in a coverage gap discount program, under which they must agree to offer 70 percent point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- imposed a non-deductible annual fee on pharmaceutical manufacturers or importers who sell "branded prescription drugs" and biologic agents apportioned among these entities according to their market share in certain federal government programs;
- established the Center for Medicare and Medicaid Innovation within the Centers for Medicare and Medicaid Services to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending;
- created the Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- required reporting of certain financial arrangements between manufacturers of drugs, biologics, devices, and medical supplies and physicians and teaching hospitals under the federal Physician Payment Sunshine Act; and
- required annual reporting of certain information regarding drug samples that manufacturers and distributors provide to licensed practitioners.

There have been executive, judicial and Congressional challenges to certain aspects of the ACA. The U.S. Supreme Court is currently reviewing the constitutionality of the ACA in its entirety, and is expected to issue its decision in 2021. Although the U.S. Supreme Court has not yet ruled on the constitutionality of the ACA, President Biden issued an executive order to initiate a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is unclear how the Supreme Court ruling, other such litigation and the healthcare reform measures of the Biden administration will impact the ACA.

Other legislative changes have been proposed and adopted since the ACA was enacted, including aggregate reductions of Medicare payments to providers of 2% per fiscal year, which was temporarily suspended from May 1, 2020 through December 31, 2021 due to the COVID-19 pandemic.

In addition, the American Taxpayer Relief Act of 2021, effective January 1, 2024, would eliminate the statutory cap on rebate amounts owed by drug manufacturers under the Medicaid Drug Rebate Program, or MDRP, which is currently capped at 100% of the AMP for a covered outpatient drug. In the future, there may be additional challenges and/or amendments to the ACA.

Moreover, the cost of prescription pharmaceuticals has been the subject of considerable discussion in the United States. Congress has considered and passed legislation, and the former Trump administration pursued several regulatory reforms to further increase transparency around prices and price increases, lower

out-of-pocket costs for consumers, and decrease spending on prescription drugs by government programs. Congress has also continued to conduct inquiries into the prescription drug industry's pricing practices. While several proposed reform measures will require Congress to pass legislation to become effective, Congress and the new Biden administration have each indicated that it will continue to seek new legislative and/or administrative measures to address prescription drug costs.

At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. It also possible that governmental action will be taken in response to the COVID-19 pandemic.

We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could impact the amounts that federal and state governments and other third-party payors will pay for healthcare products and services.

Facilities

Since 2018, our corporate headquarters has been located at 245 Main Street, Second Floor Cambridge, Massachusetts 02142, where we currently occupy approximately 586 square feet of office space under a service agreement that can be terminated by either party upon 30 days written notice. We also occupy approximately 3,657 square feet of office space in San Diego, California, under a lease that terminates on April 30, 2026; approximately 190 square feet of office space in New York, New York under a service agreement that currently runs through June 30, 2021 and automatically renews unless we provide 30 days advance notice to terminate; and approximately 66 square feet of office space in San Francisco, California under an agreement that can be terminated by either party upon 60 days notice. As of March 31, 2021, approximately 12 of our employees are located at our corporate headquarters.

Human Capital

As of March 31, 2021, we have 32 full-time employees, 29 of whom are dedicated to research and development. Twenty seven of our employees hold doctorate degrees (i.e., Ph.D. or M.D.). 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.

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.

We believe that much of our success is rooted in the diversity of our teams and our commitment to inclusion. We value diversity at all levels and focus on extending our diversity and inclusion initiatives across our entire workforce.

Legal Proceedings

We are not subject to any material legal proceedings.

MANAGEMENT

The following table provides information regarding our executive officers and members of our board of directors (ages as of the date of this prospectus):

Name	Age	Position(s)
Executive Officers		
Benjamin J. Zeskind, Ph.D.	39	Co-Founder, President, Chief Executive Officer, Director
Biren Amin	48	Chief Financial Officer, Treasurer
Scott Barrett, M.D.	58	Chief Medical Officer
Brett Hall, Ph.D.	53	Chief Scientific Officer
Non-Employee Directors		
Ann E. Berman	68	Director
Robert J. Carpenter	76	Co-Founder, Chairman
Peter Feinberg	60	Director
Laurie B. Keating	67	Director
Andrew Phillips, Ph.D.*	50	Director

* Dr. Phillips will resign as a director immediately prior to the effectiveness of the registration statement on Form S-1 of which this prospectus forms a part.

Executive Officers

Benjamin J. Zeskind, Ph.D. Dr. Zeskind has served as our Co-Founder, President, Chief Executive Officer and a member of our board of directors since February 2008. Dr. Zeskind received his S.B. in electrical engineering and computer science and his Ph.D. in bioengineering from Massachusetts Institute of Technology, or MIT, and his M.B.A. from Harvard Business School, where he was recognized as a Baker Scholar, the highest award for distinction. We believe that Dr. Zeskind is qualified to serve on our board of directors due to his extensive experience in the pharmaceutical industry and in-depth knowledge of our business.

Biren Amin. Mr. Amin has served as our Chief Financial Officer since April 2021. Prior to joining us, Mr. Amin served as a Managing Director of Jefferies Financial Group Inc., an American financial services company based in New York City, in their Biotechnology Equity Research group, from June 2011 until March 2021. Previously, he spent time at other equity research firms such as WJB Capital Group, Inc., FTN Equity Capital Markets Corporation, Stanford Group Company and Prudential Equity Group, LLC focusing on pharmaceutical and biotechnology company investments. Over approximately two decades, Mr. Amin built a strong track record on Wall Street covering small and mid-cap pharmaceutical and biotechnology companies focusing on oncology, CNS disorders, ophthalmology and rare diseases. He started his career at Aventis Pharmaceuticals Inc., a former public pharmaceutical company, which merged with Sanofi S.A., where he served as the Senior Manager in their Scientific Competitive Intelligence group. Mr. Amin received his B.S. in pharmacy from the University of the Sciences in Philadelphia, his M.S. in pharmacy from Long Island University and his M.B.A. from the Stern School of Business at New York University.

Scott Barrett, M.D. Dr. Barrett has served as our Chief Medical Officer since November 2019. Prior to joining us, Dr. Barrett served as the Executive Director of Global Medical Affairs of Incyte Corp, a publicly traded biopharmaceutical company focused on discovery, development and commercialization of proprietary therapeutics in oncology and other areas of interest, from June 2016 until November 2019. Prior to that, he served as the Senior Director of Clinical Development of Infinity Pharmaceuticals, Inc., a publicly traded biopharmaceutical drug development company, from July 2014 until June 2016. Dr. Barrett is a trained physician-scientist, accomplished medical oncologist and a drug discovery and development expert with more than 30 years of clinical and research experience. He received his B.A. in natural science from The Johns Hopkins University as a Beneficial-Hodson Scholarship recipient, his M.D. from the University of Miami School of Medicine and completed his internal medicine residency at the Mayo Clinic in Rochester, Minnesota.

Dr. Barrett then went on to complete a fellowship in medical oncology at Memorial Sloan-Kettering Cancer Center and became board-certified in internal medicine and medical oncology.

Brett Hall, Ph.D. Dr. Hall has served as our Chief Scientific Officer since November 2019. He also serves as the President, Founder and Chairman of the board of directors of Bioarkive, Inc., or Bioarkive, a privately held biotechnology services company, and President and Founder of Trans Medical Sciences, LLC, a privately held consulting company for biotechnology and biopharmaceutical companies. Prior to joining us, Dr. Hall served as the Chief Executive Officer of Asellus Therapeutics, LLC, a privately held biotechnology company, from July 2015 until May 2018. Dr. Hall served in roles of increasing responsibility with Johnson & Johnson, a multinational corporation that develops medical devices, pharmaceuticals and consumer packaged goods, from November 2008 until July 2014, culminating in his role as the Head of Biomarkers of the Hematologic Disease Area Stronghold, where he led translational efforts for Sylvant® and Imbruvica® through clinical development. Subsequently, he served as the Head of Translational Medicine of Oncology at Medimmune, LLC, the biologics division of AstraZeneca Pharmaceuticals LP, from July 2014 until July 2015, before transitioning to executive discovery roles in biotechnology. He has extensive drug development and leadership experience ranging from early drug discovery through translational clinical sciences, including multiple drug registrations. Dr. Hall has extensively published in the areas of TME and translational sciences, and holds multiple patents for drug pharmacology and discovery. He was also a tenure-track Assistant Professor at Ohio State University where his laboratory focused on the development of human TME-aligned models to better translate preclinical data into the clinic and discover novel biomarkers. Prior to Dr. Hall's career in life sciences, he served in the United States Air Force and worked as an investment banker. Dr. Hall received his B.S. in biochemistry from Ohio State University, his Ph.D. in immunology and cancer biology from West Virginia University and completed his post-doctoral fellowship in cancer cell epigenetics at St. Jude Children's Research Hospital.

Non-Employee Directors

Ann E. Berman. Ms. Berman has served as a member of our board of directors since July 2021. She currently serves as a member of the board of directors of Loews Corporation and a member of the board of trustees of Beth Israel Deaconess Medical Center and is the Chairwoman of its Compliance and Risk Committee. From September 2011 until June 2021, Ms. Berman served as a member of the board of directors and Chair of the Audit Committee of Cantel Medical Corp. In addition, she served as a member of the board of directors and Chair of the Audit Committee of Eaton Vance Corporation from February 2006 until March 2021. Prior to these roles, Ms. Berman served in various financial and risk management capacities at Harvard University, including as Senior Advisor to the President of Harvard University, Vice President of Finance and Chief Financial Officer. She received her B.A. with distinction in French language and literature from Cornell University, where she was Phi Beta Kappa, and her M.B.A. from the University of Pennsylvania's Wharton School of Business. We believe that Ms. Berman is qualified to serve on our board of directors due to her accounting and financial management expertise as a Certified Public Accountant, experience as Chief Financial Officer of a major research university, service as an audit committee member and chair of other public companies, and depth of experience in risk management.

Robert J. Carpenter. Mr. Carpenter has served on our board of directors since May 2009. Mr. Carpenter also currently serves as the Chairman of Hydra Biosciences, Inc., or Hydra Biosciences, a privately held clinical-stage biopharmaceutical company. From 1992 until 2015, he served as the Chief Executive Officer of Boston Medical Investors, Inc., a venture capital firm. Mr. Carpenter has founded and served in executive management and board roles at numerous biotechnology companies, including Olaris Inc., Integrated Genetics and GelTex Pharmaceuticals, both of which merged with Genzyme Corporation, and VacTex Corp., which was acquired by Aquila Biopharmaceuticals, Inc. Mr. Carpenter received his B.S. in engineering from the U.S. Military Academy at West Point, his M.S. in computer science from Stanford University and his M.B.A. from Harvard Business School. We believe that Mr. Carpenter is qualified to serve on our board of directors due to his extensive leadership skills and experience in the healthcare and biotechnology industries.

Peter Feinberg. Mr. Feinberg has served on our board of directors since January 2021. Mr. Feinberg also currently serves as Partner and was a Founding Member of Boxcar Partners, a venture capital investment firm with a focus on biotechnology investing, and Founder of Sporos Bioventures, Inc. In addition, he currently serves as Co-Founder of BridgeBio Pharma, Inc., a publicly traded biotechnology company focusing on

genetic diseases, Boxcar PMJ LP and Emerging Security Solutions. He has more than three decades of experience in the financial services industry at Oppenheimer & Co. Inc. where he served as a Managing Director. Mr. Feinberg received his B.S. in finance from Whittier College. We believe that Mr. Feinberg is qualified to serve on our board of directors due to his extensive leadership skills and experience in the financial and biotechnology industries.

Laurie B. Keating. Ms. Keating has served on our board of directors since March 2021. Ms. Keating also currently serves as the Executive Vice President, Chief Legal Officer and Secretary of Alnylam Pharmaceuticals, Inc., since March 2019, and also served as its Senior Vice President, General Counsel and Secretary from September 2014 until March 2019. From September 2004 until January 2014, she served as the Senior Vice President, General Counsel and Secretary of Millennium Pharmaceuticals, Inc., a wholly owned oncology-focused subsidiary of Takeda Pharmaceutical Company Limited since 2008, and was the founding Chief Executive Officer and a member of the board of directors of Hydra Biosciences. Ms. Keating earned her A.B. in economics from the University of California, Berkeley and her J.D. from the University of California, Hastings College of the Law. We believe that Ms. Keating is qualified to serve on our board of directors due to her extensive leadership skills and experience in the biotechnology industry.

Andrew Phillips, Ph.D. Dr. Phillips has served on our board of directors since December 2020. Dr. Phillips also currently serves as a Managing Director at Cormorant Asset Management, LP, and serves as a member of the board of directors of BiVacor, Inc., Elevation Oncology, Inc. and Enliven Therapeutics, Inc. Prior to joining us, he served in various roles, including President, Chief Executive Officer and Chief Scientific Officer of C4 Therapeutics, Inc., from January 2016 until March 2020. Prior to that, Dr. Phillips served as the Senior Director of the Center for the Development of Therapeutics at the Broad Institute of MIT and Harvard. Earlier in his career, he was a Full Professor of chemistry at Yale University and an Assistant, Associate and Full Professor of chemistry and biochemistry at the University of Colorado. Dr. Phillips received his B.Sc., with honors, and his Ph.D. in biochemistry and chemistry from the University of Canterbury in Christchurch, New Zealand. We believe that Dr. Phillips is qualified to serve on our board of directors due to his extensive leadership skills and experience in the pharmaceutical industry.

Family Relationships

There are no family relationships among any of our directors or executive officers.

Composition of Our Board of Directors

Our board of directors currently consists of five directors. Our amended and restated certificate of incorporation and amended and restated bylaws will provide that the number of directors on our board of directors will be fixed from time to time by resolution of the board of directors and that our board of directors will be divided into three classes, as nearly equal in number as possible, with the directors in each class serving for a three-year term, and one class being elected each year by our stockholders. Dr. Phillips will resign as a director immediately prior to the effectiveness of the registration statement on Form S-1, of which this prospectus forms a part.

When considering whether directors have the experience, qualifications, attributes or skills, taken as a whole, to enable our board of directors to satisfy its oversight responsibilities effectively in light of our business and structure, the board of directors focuses primarily on each person's background and experience as reflected in the information discussed in each of the directors' individual biographies set forth above. We believe that our directors provide an appropriate mix of experience and skills relevant to the size and nature of our business.

Our amended and restated certificate of incorporation will provide that our board of directors will be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of stockholders, with the other classes continuing for the remainder of their respective three-year terms. Our current directors will be divided among the three classes as follows:

- the Class I director will be Ann E. Berman, and her term will expire at the annual meeting of stockholders to be held in 2022;
- the Class II directors will be Peter Feinberg and Laurie B. Keating, and their terms will expire at the annual meeting of stockholders to be held in 2023; and

- the Class III directors will be Robert J. Carpenter and Benjamin J. Zeskind, Ph.D., and their terms will expire at the annual meeting of stockholders to be held in 2024.

Director Independence

Our board of directors has determined that, of our directors, Ann E. Berman, Robert J. Carpenter and Laurie B. Keating do not have a relationship 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 rules of the Nasdaq Stock Market LLC, or the Nasdaq rules. There are no family relationships among any of our directors or executive officers.

Board Leadership Structure

Our board of directors is currently chaired by Robert J. Carpenter. Our corporate governance guidelines will provide that, if the chairman of the board is a member of management or does not otherwise qualify as independent, the independent directors of the board may elect a lead director. The lead director's responsibilities would include, but would not be not limited to: presiding over all meetings of the board of directors at which the chairman is not present, including any executive sessions of the independent directors; approving board meeting schedules and agendas; and acting as the liaison between the independent directors and the chief executive officer and chairman of the board. Our corporate governance guidelines further provide the flexibility for our board of directors to modify our leadership structure in the future as it deems appropriate.

Role of the Board in Risk Oversight

One of the key functions of our board of directors is informed oversight of our risk management process. Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through our board of directors as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. In particular, our board of directors is responsible for monitoring and assessing strategic risk exposure and our audit committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. Our audit committee also monitors compliance with legal and regulatory requirements. Our nominating and corporate governance committee will monitor the effectiveness of our corporate governance practices, including whether they are successful in preventing illegal or improper liability-creating conduct. Our compensation committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, our entire board of directors is regularly informed through committee reports about such risks.

Board Committees

Our board of directors has established three standing committees—audit, compensation and nominating and corporate governance—each of which operates under a charter that has been approved by our board of directors. Upon our listing on the Nasdaq Global Market, each committee's charter will be available under the Corporate Governance section of our website at *www.immuneering.com*. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be a part of this prospectus.

Audit Committee

The audit committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our registered public accounting firm;
- overseeing the work of our registered public accounting firm, including through the receipt and consideration of reports from such firm;

- reviewing and discussing with management and the registered public accounting firm our annual and quarterly financial statements and related disclosures;
- coordinating our board of directors' oversight of our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;
- discussing our risk management policies;
- meeting independently with our internal auditing staff, if any, registered public accounting firm and management;
- reviewing and approving or ratifying any related person transactions; and
- preparing the audit committee report required by SEC rules.

The members of our audit committee are Ann E. Berman, Robert J. Carpenter and Laurie B. Keating. Ann E. Berman serves as the chairperson of the committee. All members of our audit committee meet the requirements for financial literacy under the applicable Nasdaq rules. Our board of directors has determined that all members of our audit committee meet the independence requirements of Rule 10A-3 under the Exchange Act and the applicable Nasdaq rules. Our board of directors has determined that Ann E. Berman is an "audit committee financial expert" as defined by applicable SEC rules and has the requisite financial sophistication as defined under the applicable Nasdaq rules.

Compensation Committee

The compensation committee's responsibilities include:

- reviewing and approving, or recommending for approval by the board of directors, the compensation of our Chief Executive Officer and our other executive officers;
- overseeing and administering our cash and equity incentive plans;
- reviewing and making recommendations to our board of directors with respect to director compensation;
- reviewing and discussing annually with management our "Compensation Discussion and Analysis," to the extent required; and
- preparing the annual compensation committee report required by SEC rules, to the extent required.

The members of our compensation committee are Laurie B. Keating and Robert J. Carpenter. Laurie B. Keating serves as the chairperson of the committee. Our board of directors has determined that each of Laurie B. Keating and Robert J. Carpenter is independent under the applicable Nasdaq rules, including the Nasdaq rules specific to membership on the compensation committee, and is a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee's responsibilities include:

- identifying individuals qualified to become board members;
- recommending to our board of directors the persons to be nominated for election as directors and to each board committee;
- developing and recommending to our board of directors corporate governance guidelines, and reviewing and recommending to our board of directors proposed changes to our corporate governance guidelines from time to time; and
- overseeing a periodic evaluation of our board of directors.

The members of our nominating and corporate governance committee are Robert J. Carpenter and Ann E. Berman. Robert J. Carpenter serves as the chairperson of the committee. Our board of directors has determined that Robert J. Carpenter and Ann E. Berman are independent under the applicable Nasdaq rules.

Compensation Committee Interlocks and Insider Participation

No member of our compensation committee is or has been our current or former officer or employee. None of our executive officers served as a director or a member of a compensation committee (or other committee serving an equivalent function) of any other entity, one of whose executive officers served as a director or member of our compensation committee during the last completed fiscal year.

Code of Ethics and Code of Conduct

We will adopt a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. Upon our listing on the Nasdaq Global Market, our code of business conduct and ethics will be available under the Corporate Governance section of our website at *www.immuneering.com*. In addition, we intend to post on our website all disclosures that are required by law or the Nasdaq rules concerning any amendments to, or waivers from, any provision of the code. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be a part of this prospectus.

EXECUTIVE AND DIRECTOR COMPENSATION

This section discusses the material components of the executive compensation program for our executive officers who are named in the "2020 Summary Compensation Table" below. Actual compensation programs that we adopt may differ materially from currently planned programs as summarized in this discussion. As an "emerging growth company" (as defined in the JOBS Act), we are not required to include a Compensation Discussion and Analysis and have elected to comply with the scaled disclosure requirements applicable to emerging growth companies.

- Benjamin J. Zeskind, Ph.D., Chief Executive Officer;
- Brett Hall, Ph.D., Chief Scientific Officer; and
- Scott Barrett, M.D., Chief Medical Officer.

2020 Summary Compensation Table

The following table sets forth information concerning the compensation awarded to, earned by and paid to our named executive officers with respect to the year ended December 31, 2020.

Name and Principal Position	Year	Salary ($)	Bonus ($)[1]	All Other Compensation ($)	Total
Benjamin J. Zeskind, Ph.D. Chief Executive Officer	2020	292,550	500,000	13,495[3]	806,045
Brett Hall, Ph.D. Chief Scientific Officer	2020	615,000	160,000	200	775,200
Scott Barrett, M.D. Chief Medical Officer	2020	504,000	200,000[2]	11,400[4]	715,400

(1) The amounts reported represent discretionary annual bonuses paid in recognition of 2020 performance. Refer to the section titled "2020 Bonuses" below for additional information.

(2) Dr. Barrett's aggregate bonus award for 2020 consists of (i) a discretionary bonus of $50,000, and (ii) a signing bonus of $180,000, of which $150,000 was paid out in 2020. Dr. Barrett's signing bonus was paid in $15,000 monthly increments, beginning in November 2019 and ending in October 2020, subject to his continued service with the Company.

(3) The amount reported includes employer contributions under the Company's 401(k) plan and a Company paid cell phone.

(4) The amount reported includes employer contributions under the Company's 401(k) plan.

Narrative to Summary Compensation Table

2020 Salaries

The named executive officers receive a base salary to compensate them for services rendered to the Company. The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role and responsibilities. Effective July 1, 2020, following its annual review, the Board increased Dr. Hall's base salary from $600,000 to $630,000. Drs. Zeskind and Barrett did not receive increases in their annual base salaries for 2020.

2020 Bonuses

For 2020, we offered our named executive officers the opportunity to earn discretionary cash bonuses based on performance. In December 2020, the Board evaluated the Company's and the named executive officers' 2020 performance and, in recognition of the Company's and each named executive officer's 2020 performance, elected to pay the cash bonuses set forth above in the 2020 Summary Compensation Table.

Pursuant to the terms of his employment agreement, Dr. Barrett was also entitled to a signing bonus in the amount of $180,000 in connection with the commencement of his employment in November 2019, payable in twelve monthly installments of $15,000 from November 2019 until October 2020, subject to his continued employment.

Equity Compensation

We have historically granted stock options to our employees, including our named executive officers, under the 2015 Plan as the long-term incentive component of our compensation program. Our stock options generally allow employees to purchase shares of our Class A common stock at a price per share equal to the fair market value of our Class A common stock on the date of grant. During 2020, the Board of Directors modified an outstanding option award of Dr. Hall to convert such option award to an incentive stock option award. There was no incremental fair value associated with this modification under ASC 718. Please see the table titled "Outstanding Equity Awards at 2020 Fiscal Year-End" below for information regarding outstanding stock option awards held by our named executive officers as of December 31, 2020.

In connection with this offering, we intend to adopt a 2021 Incentive Award Plan, referred to below as the 2021 Plan, in order to facilitate the grant of cash and equity incentives to directors, employees (including our named executive officers) and consultants of the Company and certain of its affiliates to enable the Company and certain of its affiliates to obtain and retain services of these individuals, which we consider to be essential to our long-term success. Following the effective date of the 2021 Plan, we do not intend to make any further grants under the 2015 Plan. However, the 2015 Plan will continue to govern the terms and conditions of the outstanding awards granted under it. For additional information about the 2021 Plan, please see the section titled "Incentive Compensation Plans" below.

Other Elements of Compensation

Retirement Plans

We currently maintain a 401(k) retirement savings 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. The Code allows eligible employees to defer a portion of their compensation, within prescribed limits, on a pre-tax basis through contributions to the 401(k) plan. For 2020, we matched contributions made by participants in the 401(k) plan up to four percent of the employees' 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.

Health and Welfare Plans

All of our full-time employees, including our named executive officers, are eligible to participate in our health and welfare plans on the same terms.

Executive Compensation Arrangements

Drs. Hall and Barrett are each party to an employment or letter agreement with us that sets forth the terms and conditions of their employment. Our named executive officers have entered agreements with restrictive covenants relating to non-competition and non-solicitation of customers and employees during employment and for one year following a termination of employment. We expect to enter into new employment agreements with the named executive officers that will supersede their existing agreements effective upon the effectiveness of the registration statement relating to this offering. The terms of these new agreements are not yet known.

Outstanding Equity Awards at 2020 Fiscal Year-End

The following table summarizes the number of shares of Class A common stock underlying outstanding equity incentive plan awards for each named executive officer as of December 31, 2020.

		Option Awards			
Name	Vesting Start Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date
Benjamin J. Zeskind, Ph.D.	9/20/2019	150,000[1]	—	4.21	12/15/2029
Brett Hall, Ph.D.	11/1/2019	39,000[2]	105,000[2]	4.21	12/15/2029
	5/5/2018	41,979[2]	23,021[2]	4.21	2/24/2029
Scott Barrett, M.D.	11/11/2019	37,673[2]	101,427[2]	4.21	12/15/2029

(1) The options may be early exercised in full for restricted stock as of the date of the grant. The amounts reported as exercisable or unexercisable represent the number of shares as to which the options are vested or unvested, respectively. 100% of the underlying shares vest on the first anniversary of the vesting start date indicated.

(2) The options may be early exercised in full for restricted stock as of the date of grant. The amounts reported as exercisable or unexercisable represent the number of shares as to which the options are vested or unvested, respectively. The options vest as to 25% of the underlying shares on the first anniversary of the vesting start date indicated and in equal monthly installments over the following three years, subject to continued employment through each applicable vesting date. In the event of a change in control of the Company, 50% of the remaining unvested shares subject to the option will become vested and exercisable upon such change in control.

2020 Director Compensation

We did not pay our directors any compensation for serving on the Board during 2020. We intend to approve and implement a compensation program for our non-employee directors that will become effective on the effectiveness of the registration statement for this offering. The terms of the program have not yet been determined.

Incentive Compensation Plans

The following summarizes the expected material terms of 2021 Incentive Award Plan, or the 2021 Plan, and the 2021 Employee Stock Purchase Plan, which will be the long-term incentive compensation plans in which our directors and employees, including the named executive officers, are eligible to participate following the consummation of this offering, and the 2015 Plan, under which we have previously made periodic grants of equity and equity-based awards to our directors and named executive officers.

2021 Incentive Award Plan

Effective the day prior to the first public trading date of our Class A common stock, we intend to adopt and ask our stockholders to approve the 2021 Plan, under which we may grant cash and equity-based incentive awards to eligible service providers in order to attract, retain and motivate the persons who make important contributions to the Company. The expected material terms of the 2021 Plan are summarized below.

Eligibility and Administration

Our employees, consultants and directors, and employees and consultants of our subsidiaries, will be eligible to receive awards under the 2021 Plan. The 2021 Plan will be administered by our board of directors, which may delegate its duties and responsibilities to one or more committees of our directors and/or officers (referred to collectively as the plan administrator below), subject to the limitations imposed under the 2021 Plan, Section 16 of the Exchange Act, stock exchange rules and other applicable laws. The plan administrator will have the authority to take all actions and make all determinations under the 2021 Plan, to interpret the 2021 Plan and award agreements and to adopt, amend and repeal rules for the administration of the 2021 Plan as it deems advisable. The plan administrator will also have the authority to grant awards, determine which eligible service providers receive awards and set the terms and conditions of all awards under the 2021 Plan, including any vesting and vesting acceleration provisions, subject to the conditions and limitations in the 2021 Plan. We expect that the compensation committee will be the initial administrator of the 2021 Plan.

Shares Available for Awards

An aggregate of shares of our Class A common stock will initially be available for issuance under the 2021 Plan. The number of shares initially available for issuance will be increased annually on January 1 of each calendar year beginning in 2022 and ending in and including 2031, equal to the lesser of (A) % of the shares of Class A common stock outstanding on the final day of the immediately preceding calendar year and (B) a smaller number of shares determined by our board of directors. No more than shares of Class A common stock may be issued under the 2021 Plan upon the exercise of incentive stock options. Shares issued under the 2021 Plan may be authorized but unissued shares, shares purchased on the open market or treasury shares.

If an award under the 2021 Plan or the 2015 Plan, expires, lapses or is terminated, exchanged for cash, surrendered, repurchased, canceled without having been fully exercised or forfeited, any unused shares subject to the award will, as applicable, become or again be available for new grants under the 2021 Plan. In addition, any shares delivered to the Company by a participant to satisfy the applicable exercise or purchase price of an award granted under the 2021 Plan or the 2015 Plan or to satisfy any applicable tax withholding obligation of an award granted under the 2021 Plan or the 2015 Plan will, as applicable, become or again be available for award grants under the 2021 Plan. Awards granted under the 2021 Plan in substitution for any options or other stock or stock-based awards granted by an entity before the entity's merger or consolidation with us or our acquisition of the entity's property or stock will not reduce the shares available for grant under the 2021 Plan, but may count against the maximum number of shares that may be issued upon the exercise of incentive stock options, or ISOs.

Awards

The 2021 Plan provides for the grant of stock options, including ISOs, and nonqualified stock options, or NSOs, stock appreciation rights, or SARs, restricted stock, dividend equivalents, restricted stock units, or RSUs, and other stock or cash-based awards. Certain awards under the 2021 Plan may constitute or provide for payment of "nonqualified deferred compensation" under Section 409A of the Code. All awards under the 2021 Plan will be set forth in award agreements, which will detail the terms and conditions of awards, including any applicable vesting and payment terms and post-termination exercise limitations. A brief description of each award type follows.

- Stock Options and SARs. Stock options provide for the purchase of shares of our Class A common stock in the future at an exercise price set on the grant date. ISOs, by contrast to NSOs, may provide tax deferral beyond exercise and favorable capital gains tax treatment to their holders if certain holding period and other requirements of the Code are satisfied. SARs entitle their holder, upon exercise, to receive from us an amount equal to the appreciation of the shares subject to the award between the grant date and the exercise date. The plan administrator will determine the number of shares covered by each option and SAR, the exercise price of each option and SAR and the conditions and limitations applicable to the exercise of each option and SAR. The exercise price of a stock option or SAR will not be less than 100% of the fair market value of the underlying share on the grant date (or 110% in the case of ISOs granted to certain significant stockholders), except with respect to certain substitute awards granted in connection with a corporate transaction. The term of a stock option or SAR may not be longer than ten years (or five years in the case of ISOs granted to certain significant stockholders).
- Restricted Stock and RSUs. Restricted stock is an award of nontransferable shares of our Class A common stock that remain forfeitable unless and until specified conditions are met and which may be subject to a purchase price. RSUs are contractual promises to deliver shares of our Class A common stock in the future, which may also remain forfeitable unless and until specified conditions are met and may be accompanied by the right to receive the equivalent value of dividends paid on shares of our Class A common stock prior to the delivery of the underlying shares. The plan administrator may provide that the delivery of the shares underlying RSUs will be deferred on a mandatory basis or at the election of the participant. The terms and conditions applicable to restricted stock and RSUs will be determined by the plan administrator, subject to the conditions and limitations contained in the 2021 Plan.

- Other Stock or Cash-Based Awards. Other stock or cash-based awards are awards of cash, fully vested shares of our Class A common stock and other awards valued wholly or partially by referring to, or otherwise based on, shares of our Class A common stock or other property. Other stock or cash-based awards may be granted to participants and may also be available as a payment form in the settlement of other awards, as standalone payments and as payment in lieu of compensation to which a participant is otherwise entitled. The plan administrator will determine the terms and conditions of other stock or cash-based awards, which may include any purchase price, performance goal, transfer restrictions and vesting conditions.

Performance Criteria

The plan administrator may select performance criteria for an award to establish performance goals for a performance period. Performance criteria under the 2021 Plan may include, but are not limited to, the following: net earnings or losses (either before or after one or more of interest, taxes, depreciation, amortization, and non-cash equity-based compensation expense); gross or net sales or revenue or sales or revenue growth; net income (either before or after taxes) or adjusted net income; profits (including but not limited to gross profits, net profits, profit growth, net operation profit or economic profit), profit return ratios or operating margin; budget or operating earnings (either before or after taxes or before or after allocation of corporate overhead and bonus); cash flow (including operating cash flow and free cash flow or cash flow return on capital); return on assets; return on capital or invested capital; cost of capital; return on stockholders' equity; total stockholder return; return on sales; costs, reductions in costs and cost control measures; expenses; working capital; earnings or loss per share; adjusted earnings or loss per share; price per share or dividends per share (or appreciation in or maintenance of such price or dividends); regulatory achievements or compliance; implementation, completion or attainment of objectives relating to research, development, regulatory, commercial, or strategic milestones or developments; market share; economic value or economic value added models; division, group or corporate financial goals; customer satisfaction/growth; customer service; employee satisfaction; recruitment and maintenance of personnel; human resources management; supervision of litigation and other legal matters; strategic partnerships and transactions; financial ratios (including those measuring liquidity, activity, profitability or leverage); debt levels or reductions; sales-related goals; financing and other capital raising transactions; cash on hand; acquisition activity; investment sourcing activity; and marketing initiatives, any of which may be measured in absolute terms or as compared to any incremental increase or decrease. Such performance goals also may be based solely by reference to the Company's performance or the performance of a subsidiary, division, business segment or business unit of the Company or a subsidiary, or based upon performance relative to performance of other companies or upon comparisons of any of the indicators of performance relative to performance of other companies. When determining performance goals, the plan administrator may provide for exclusion of the impact of an event or occurrence which the plan administrator determines should appropriately be excluded, including, without limitation, non-recurring charges or events, acquisitions or divestitures, changes in the corporate or capital structure, events unrelated to the business or outside of the control of management, foreign exchange considerations, and legal, regulatory, tax or accounting changes.

Certain Transactions

In connection with certain corporate transactions and events affecting our Class A common stock, including a change in control, or change in any applicable laws or accounting principles, the plan administrator has broad discretion to take action under the 2021 Plan to prevent the dilution or enlargement of intended benefits, facilitate the transaction or event or give effect to the change in applicable laws or accounting principles. This includes canceling awards for cash or property, accelerating the vesting of awards, providing for the assumption or substitution of awards by a successor entity, adjusting the number and type of shares subject to outstanding awards and/or with respect to which awards may be granted under the 2021 Plan and replacing or terminating awards under the 2021 Plan. In addition, in the event of certain non-reciprocal transactions with our stockholders, the plan administrator will make equitable adjustments to awards outstanding under the 2021 Plan as it deems appropriate to reflect the transaction.

Provisions of the 2021 Plan Relating to Director Compensation

The 2021 Plan provides that the plan administrator may establish compensation for non-employee directors from time to time subject to the 2021 Plan's limitations. Prior to commencing this offering, we intend to

approve and implement a compensation program for our non-employee directors. Our board of directors or its authorized committee may modify the non-employee director compensation program from time to time in the exercise of its business judgment, taking into account such factors, circumstances and considerations as it deems relevant from time to time, provided that the sum of any cash compensation or other compensation and the grant date fair value of any equity awards granted under the 2021 Plan as compensation for services as a non-employee director during any fiscal year may not exceed $ in the fiscal year of the non-employee director's initial service and $ in any other fiscal year. The plan administrator may make exceptions to this limit for individual non-employee directors in extraordinary circumstances, as the plan administrator may determine in its discretion, subject to the limitations in the 2021 Plan.

Plan Amendment and Termination

Our board of directors may amend or terminate the 2021 Plan at any time; however, no amendment, other than an amendment that increases the number of shares available under the 2021 Plan, may materially and adversely affect an award outstanding under the 2021 Plan without the consent of the affected participant and stockholder approval will be obtained for any amendment to the extent necessary to comply with applicable laws or the rules of the applicable stock exchange on which the common stock is then traded. Further, the plan administrator may, without the approval of our stockholders, amend any outstanding stock option or SAR to reduce its price per share, including in the context of corporate transactions or equity restructurings, as described above. The 2021 Plan will remain in effect until the tenth anniversary of its effective date, unless earlier terminated by our board of directors. No awards may be granted under the 2021 Plan after its termination.

Foreign Participants, Claw-Back Provisions, Transferability and Participant Payments

The plan administrator may modify awards granted to participants who are foreign nationals or employed outside the United States or establish subplans or procedures to address differences in laws, rules, regulations or customs of such foreign jurisdictions. All awards will be subject to any company claw-back policy as set forth in such claw-back policy or the applicable award agreement. Except as the plan administrator may determine or provide in an award agreement, awards under the 2021 Plan are generally non-transferrable, except by will or the laws of descent and distribution, or, subject to the plan administrator's consent, pursuant to a domestic relations order, and are generally exercisable only by the participant. With regard to tax withholding obligations arising in connection with awards under the 2021 Plan and exercise price obligations arising in connection with the exercise of stock options under the 2021 Plan, the plan administrator may, in its discretion, accept cash, wire transfer or check, shares of our Class A common stock that meet specified conditions, a promissory note, a "market sell order," such other consideration as the plan administrator deems suitable or any combination of the foregoing.

2021 Employee Stock Purchase Plan

Effective the day prior to the first public trading date of our Class A common stock, we intend to adopt and ask our stockholders to approve the 2021 Employee Stock Purchase Plan, or the 2021 ESPP, the expected material terms of which are summarized below.

Shares Available for Awards; Administration

A total of shares of our Class A common stock will initially be reserved for issuance under the 2021 ESPP. In addition, the number of shares available for issuance under the 2021 ESPP will be annually increased on January 1 of each calendar year beginning in 2022 and ending in and including 2031, by an amount equal to the lesser of (A) % of the shares outstanding on the final day of the immediately preceding calendar year and (B) such smaller number of shares as is determined by our board of directors, provided that no more than shares of our Class A common stock may be issued under the 2021 ESPP. Our board of directors or a committee of our board of directors will administer and will have authority to interpret the terms of the 2021 ESPP and determine eligibility of participants. We expect that the compensation committee will be the initial administrator of the 2021 ESPP.

Eligibility

All of our employees will be eligible to participate in the 2021 ESPP. However, an employee may not be granted rights to purchase stock under our 2021 ESPP if the employee, immediately after the grant, would own (directly or through attribution) stock possessing 5% or more of the total combined voting power or value of all classes of our stock.

Grant of Rights

The 2021 ESPP is intended to qualify under Section 423 of the Code and stock will be offered under the 2021 ESPP during offering periods. The length of the offering periods under the 2021 ESPP will be determined by the plan administrator and may be up to twenty-seven months long. Employee payroll deductions will be used to purchase shares on each purchase date during an offering period. The purchase dates for each offering period will be the final trading day in the offering period. Offering periods under the 2021 ESPP will commence when determined by the plan administrator. The plan administrator may, in its discretion, modify the terms of future offering periods.

The 2021 ESPP permits participants to purchase Class A common stock through payroll deductions of up to a specified percentage of their eligible compensation. The plan administrator will establish a maximum number of shares that may be purchased by a participant during any offering period. In addition, no employee will be permitted to accrue the right to purchase stock under the 2021 ESPP at a rate in excess of $25,000 worth of shares during any calendar year during which such a purchase right is outstanding (based on the fair market value per share of our Class A common stock as of the first day of the offering period).

On the first trading day of each offering period, each participant will automatically be granted an option to purchase shares of our Class A common stock. The option will expire at the end of the applicable offering period, and will be exercised at that time to the extent of the payroll deductions accumulated during the offering period. The purchase price of the shares, in the absence of a contrary designation, will be 85% of the lower of the fair market value of our Class A common stock on the first trading day of the offering period or on the purchase date. Participants may voluntarily end their participation in the 2021 ESPP at any time during a specified period prior to the end of the applicable offering period, and will be paid their accrued payroll deductions that have not yet been used to purchase shares of Class A common stock. Participation ends automatically upon a participant's termination of employment.

A participant may not transfer rights granted under the 2021 ESPP other than by will or the laws of descent and distribution, and such rights are exercisable only by the participant.

Certain Transactions

In the event of certain non-reciprocal transactions or events affecting our Class A common stock, the plan administrator will make equitable adjustments to the 2021 ESPP and outstanding rights. In the event of certain unusual or non-recurring events or transactions, including a change in control, the plan administrator may provide for (1) the replacement of outstanding rights with other rights or property or termination of outstanding rights in exchange for cash, (2) the assumption or substitution of outstanding rights by the successor or survivor corporation or parent or subsidiary thereof, if any, (3) the adjustment in the number and type of shares of stock subject to outstanding rights, (4) the use of participants' accumulated payroll deductions to purchase stock on a new purchase date prior to the next scheduled purchase date and termination of any rights under ongoing offering periods or (5) the termination of all outstanding rights.

Plan Amendment

The plan administrator may amend, suspend or terminate the 2021 ESPP at any time. However, stockholder approval will be obtained for any amendment that increases the aggregate number or changes the type of shares that may be sold pursuant to rights under the 2021 ESPP, changes the corporations or classes of corporations whose employees are eligible to participate in the 2021 ESPP or changes the 2021 ESPP in any manner that would cause the 2021 ESPP to no longer be an employee stock purchase plan within the meaning of Section 423(b) of the Code.

2015 Long Term Incentive Plan

Our board of directors and stockholders have approved the 2015 Plan, under which we may grant stock options and restricted stock to employees, directors and consultants of the Company or its subsidiaries. We have reserved a total of 2,017,981 shares of our Class A common stock for issuance under the 2015 Plan.

Following the effectiveness of the 2021 Plan, we will not make any further grants under the 2015 Plan. However, the 2015 Plan will continue to govern the terms and conditions of the outstanding awards granted under it. Shares of our Class A common stock subject to awards granted under the 2015 Plan that are forfeited, lapse unexercised or are settled in cash and which following the effective date of the 2021 Plan are not issued under the 2015 Plan will be available for issuance under the 2021 Plan. As of March 31, 2021, a total of shares of our Class A common stock were subject to outstanding stock options issued under the 2015 Plan and no other awards were outstanding under the 2015 Plan.

Administration

Our board of directors or a committee thereof is authorized to administer the 2015 Plan. Subject to the express terms and conditions of the 2015 Plan, the plan administrator has the authority to make all determinations and interpretations under the plan, establish, amend, suspend or waive rules and regulations used to administer the 2015 Plan and make any other determination and take any other action that the administrator deems necessary or desirable to administer the 2015 Plan.

Certain Transactions

The plan administrator has broad discretion to adjust the provisions of the 2015 Plan and the terms and conditions of existing and future awards, in the event of a change in control or certain transactions and events affecting our Class A common stock, such as a reorganization, merger, consolidation, combination, exchange, recapitalization, or other relevant change in capitalization of the Company. Specifically, in the event of the transactions mentioned above, the administrator may remove applicable forfeiture restrictions on any award, accelerate the time of exercisability, provide for a cash payment in consideration for the cancellation of awards, cancel awards that are unexercisable or remain subject to a restricted period on the date of a change in control, or make such adjustment to awards then outstanding as the administrator deems appropriate.

Amendment and Termination

Our board of directors may amend the 2015 Plan at any time and from time to time; provided that no amendment may materially and adversely affect the rights of any participant without the consent of the affected participant.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since January 1, 2018 to which we have been a party in which the amount involved exceeded or will exceed $120,000, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock, or 5% security holders, or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change in control and other arrangements, which are described under "Executive and Director Compensation." We also describe below certain other transactions with our directors, executive officers and stockholders.

Related Party Agreements in Effect Prior to this Offering

Series A Convertible Preferred Stock

From September 2019 to January 2020, we issued and sold to investors in a private placement an aggregate of 1,710,227 shares of Series A Preferred Stock at a purchase price of $8.5514 per share, for aggregate consideration of approximately $14.6 million. In conjunction with the issuance of Series A Preferred Stock in September 2019, we issued 785,706 shares of Series A Preferred Stock as settlement for $5.3 million of convertible notes and $0.1 million of accrued interest.

The following table sets forth the aggregate number of Series A Preferred Stock acquired by certain beneficial owners of more than 5% of our capital stock, executive officers and entities affiliated with certain of our directors in the financing transactions described above.

Participants[1]	Series A Preferred Stock	Aggregate Purchase Price (in thousands)
Merrin Investors LLC	409,289	$3,500
Robert J. Carpenter	67,561	$ 512
Benjamin J. Zeskind, Ph.D.	29,234	$ 250
Brett Hall, Ph.D.	1,169	$ 10
Scott Barrett, M.D.	2,338	$ 20
Entities affiliated with Peter Feinberg[2]	213,215	$1,509

(1) Additional details regarding these stockholders and their equity holdings are provided in this prospectus under the caption "Principal Stockholders."

(2) Consists of 66,078 shares of Series A Preferred Stock purchased by PEF LLC, 36,759 shares of Series A Preferred Stock purchased by Feinberg Investment Trust LLC, 73,519 shares of Series A Preferred Stock purchased by PF Associates L.P., 36,759 shares of Series A Preferred Stock purchased by S4K Investments LLC and 100 shares of Series A Preferred Stock purchased by Boxcar PMJ, LLC.

Series B Convertible Preferred Stock

On December 31, 2020, we issued and sold to investors in a private placement an aggregate of 3,619,292 shares of Series B Preferred Stock at a purchase price of $10.2782 per share, for an aggregate consideration of approximately $37.2 million. In addition, in April and May 2021, we issued and sold to investors in a private placement an additional 2,412,853 shares of Series B Preferred Stock at a purchase price of $10.2782 per share, for an aggregate consideration of approximately $24.8 million.

The following table sets forth the aggregate number of Series B Preferred Stock acquired by certain beneficial owners of more than 5% of our capital stock, executive officers and entities affiliated with certain of our directors in the financing transactions described above.

Participants[1]	Series B Preferred Stock	Aggregate Purchase Price (in thousands)
Merrin Investors LLC	291,878	$ 3,000
Entities affiliated with Cormorant Asset Management, LP[2]	1,216,163	$12,500
Entities advised or sub-advised by T. Rowe Price Associates, Inc.[3]	778,345	$ 8,000
Entities affiliated with Rock Springs Capital LP[4]	778,345	$ 8,000
Citadel Multi-Strategy Equities Master Fund Ltd.	1,216,165	$12,500
Benjamin J. Zeskind, Ph.D.	5,837	$ 60
Robert J. Carpenter	87,563	$ 900
Brett Hall, Ph.D.	2,431	$ 25
Scott Barrett, M.D.	1,945	$ 20
Biren Amin	1,945	$ 20
Entities affiliated with Peter Feinberg[5]	87,560	$ 900

(1) Additional details regarding these stockholders and their equity holdings are provided in this prospectus under the caption "Principal Stockholders."

(2) Consists of 927,495 shares of Series B Preferred Stock purchased by Cormorant Private Healthcare Fund III, LP, 276,920 shares of Series B Preferred Stock purchased by Cormorant Global Healthcare Master Fund, LP, and 11,748 shares of Series B Preferred Stock purchased by CRMA SPV, LP.

(3) Consists of 696,164 shares of Series B Preferred Stock purchased by T. Rowe Price Health Sciences Fund, Inc., 50,975 shares of Series B Preferred Stock purchased by TD Mutual Funds—TD Health Sciences Fund, and 31,206 shares of Series B Preferred Stock purchased by T. Rowe Price Health Sciences Portfolio.

(4) Consists of 632,405 shares of Series B Preferred Stock purchased by Rock Springs Capital Master Fund LP, and 145,940 shares of Series B Preferred Stock purchased by Four Pines Master Fund LP.

(5) Consists of 21,890 shares of Series B Preferred Stock purchased by PF Associates L.P., 21,890 shares of Series B Preferred Stock purchased by PEF LLC, 21,890 shares of Series B Preferred Stock purchased by Feinberg Investment Trust LLC and 21,890 shares of Series B Preferred Stock purchased by S4K Investments LLC.

Management and Other Agreements

Brett Hall, our Chief Scientific Officer, is Founder, President and Chairman of the board of directors of Bioarkive, a CRO that provides contract services to us. Our research and development expenses include the cost of services provided by the CRO to us, and amounted to $2.7 million and $0.4 million for the years ended December 31, 2020 and 2019, respectively. Of this amount, $0.3 million and $0.1 million was owed to the CRO at December 31, 2020 and 2019, respectively, and is included in accounts payable or accrued contract research expenses in our consolidated financial statements included elsewhere in this prospectus.

Peter Feinberg, a member of our board of directors, is the managing member of PEF LLC, which provided advisory services to us from September 2019 to September 2020. In connection with the Advisory Agreement, dated September 17, 2019, PEF LLC was initially granted a warrant for the purchase of 73,000 shares of our Class A common stock at $4.21 per share, which expire on January 8, 2030 and vested immediately. In June 2020, PEF LLC transferred a portion of its warrants to purchase 1,220 shares of our Class A common stock to Bluestar LF LLC. After the transfer, PEF LLC had a warrant to purchase 71,780 shares of our Class A common stock. In June 2021, PEF LLC exercised the entire warrant and received 71,780 shares of our Class A common stock.

Amended and Restated Investors' Rights Agreement

In connection with the issuance of our Series B Preferred Stock on December 21, 2020, we entered into an Amended and Restated Investors' Rights Agreement, or the IRA, with certain holders of our preferred stock, many which are beneficial holders of more than 5% of our capital stock or are entities with which certain of our directors are affiliated. The IRA imposes certain affirmative obligations on us and also grants certain rights to holders, including certain registration rights with respect to the securities held by them, certain information and observer rights, and certain additional rights. Certain provisions of the IRA will terminate in connection with this offering. See "Description of Capital Stock—Registration Rights" for additional information.

Amended and Restated Voting Agreement

In connection with the issuance of our Series B Preferred Stock on December 21, 2020, we entered into an Amended and Restated Voting Agreement, or the Voting Agreement, which, among other things, provides the terms for the voting of shares with respect to the constituency of our board of directors. Pursuant to the terms of the Voting Agreement, the following directors were elected to serve as members of our board of directors, and, as of the date of this prospectus, continue to so serve: Benjamin J. Zeskind, Andrew Phillips and Robert J. Carpenter. Dr. Zeskind was selected to serve on our board of directors as our Chief Executive Officer, Mr. Phillips were selected to serve on our board of directors as designated by the Cormorant Private Healthcare Fund III, LP, Cormorant Global Healthcare Master Fund, LP and CRMA SPV, LP, collectively referred to as Cormorant, and Mr. Carpenter was elected to serve on our board of directors by the holders of a majority of the then-outstanding shares of our common stock. Dr. Zeskind and Messrs. Phillips and Carpenter are joined on our board of directors by Peter Feinberg, Ann E. Berman and Laurie B. Keating and, together with the aforementioned directors, possess relevant industry experience and are acceptable to a majority of the holders as parties to the Voting Agreement.

The Voting Agreement, including its provisions concerning the rights of certain of the holders to designate directors, will terminate automatically upon the consummation of this offering.

Amended and Restated Right of First Refusal and Co-Sale Agreement

In connection with the issuance of our Series B Preferred Stock on December 21, 2020, we entered into an Amended and Restated Right of First Refusal and Co-Sale Agreement, or the ROFR and Co-Sale Agreement, with certain of our preferred stockholders, many of which are beneficial holders of more than 5% of our capital stock or are entities with which certain of our directors are affiliated. The ROFR and Co-Sale Agreement, among other things: (a) grants our investors certain rights of first refusal and co-sale with respect to proposed transfers of our securities by certain preferred stockholders; and (b) grants us certain rights of first refusal with respect to proposed transfers of our securities by certain preferred stockholders.

The ROFR and Co-Sale Agreement will automatically terminate immediately prior to the completion of this offering.

Employment Agreements

We have entered into employment agreements or consulting agreements with each of our executive officers. See “Executive and Director Compensation—Executive Compensation Arrangements.”

Director and Officer Indemnification and Insurance

Prior to the consummation of this offering, we intend to enter into separate indemnification agreements with each of our directors and executive officers. We have also purchased directors’ and officers’ liability insurance. See “Description of Capital Stock—Limitations on Liability and Indemnification of Officers and Directors.”

Directed Share Program

At our request, the DSP Underwriter has reserved for sale, at the initial public offering price, up to % of the shares of our Class A common stock offered hereby for officers, directors, employees and certain related persons. Any directed shares not purchased will be offered by the DSP Underwriter to the general public on the same basis as all other shares offered by this prospectus. We have agreed to indemnify the DSP Underwriter against certain liabilities and expenses, including liabilities under the Securities Act, in connection with the sales of the directed shares. See “Underwriting—Directed Share Program.”

Policies and Procedures for Related Person Transactions

Our board of directors has adopted a written related person transaction policy, to be effective immediately prior to the effectiveness of the registration statement of which this prospectus forms a part, setting forth the policies and procedures for the review and approval or ratification of related person transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships,

in which we were or are to be a participant, where the amount involved exceeds $120,000 in any fiscal year and a related person had, has or will have a direct or indirect material interest, including without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness and employment by us of a related person. In reviewing and approving any such transactions, our audit committee is tasked to consider all relevant facts and circumstances, including, but not limited to, whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction and the extent of the related person's interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy.

PRINCIPAL STOCKHOLDERS

The following table sets forth information as of June 30, 2021 with respect to the beneficial ownership of our Class A common stock by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our outstanding shares of Class A common stock;
- each of our named executive officers;
- each of our directors; and
- all of our executive officers and directors as a group.

The number of shares beneficially owned by each stockholder is determined in accordance with the rules issued by the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power, which includes the power to dispose of or to direct the disposition of such security. Except as indicated in the footnotes below, we believe, based on the information furnished to us, that the individuals and entities named in the table below have sole voting and investment power with respect to all shares of common stock beneficially owned by them, subject to any community property laws.

Percentage ownership of our Class A common stock before this offering is based on 14,207,203 shares of Class A common stock outstanding as of June 30, 2021. Percentage ownership of our common stock after this offering is based on shares of Class A common stock as of June 30, 2021, after giving effect to our issuance of shares of our common stock in this offering. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of Class A common stock subject to options, warrants or other rights held by such person that are currently exercisable or will become exercisable within 60 days of June 30, 2021 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. Unless noted otherwise, the address of all listed stockholders is 245 Main Street, Second Floor, Cambridge, Massachusetts 02142.

The following table does not reflect any shares of Class A common stock that may be purchased pursuant to our directed share program described under “Underwriting—Directed Share Program.” If any shares are purchased by our existing principal stockholders, directors or their affiliated entities, the number and

percentage of shares of our Class A common stock beneficially owned by them after this offering will differ from those set forth in the following table.

	Class A Common Stock Beneficially Owned Prior to Offering		Class A Common Stock Beneficially Owned After Offering	
Name of Beneficial Owner	**Number**	**Percentage**	**Number**	**Percentage**
5% or Greater Stockholders				
Citadel Multi-Strategy Equities Master Fund Ltd.[1]	1,216,165	8.6%		%
Entities affiliated with Cormorant Asset Management, LP[2]	1,216,163	8.6		
Merrin Investors LLC[3]	789,562	5.6		
Entities affiliated with Rock Springs Capital LP[4]	778,345	5.5		
Entities advised or sub-advised by T. Rowe Price Associates, Inc.[5]	778,345	5.5		
Named Executive Officers and Directors				
Benjamin J. Zeskind, Ph.D.[6]	2,395,071	16.9		
Scott Barrett, M.D.[7]	65,139	*		
Brett Hall, Ph.D.[8]	119,412	*		
Ann E. Berman	—	—		
Robert J. Carpenter[9]	621,538	4.4		
Peter Feinberg[10]	582,327	4.1		
Laurie B. Keating	—	—		
Andrew Phillips, Ph.D.	—	—		
All current executive officers and directors as a group (9 persons)[11]	3,785,432	26.4		

* Represents beneficial ownership of less than 1%.

(1) Consists of 1,216,165 shares of our Class A common stock issuable upon conversion of Series B Preferred Stock held of record by Citadel Multi-Strategy Equities Master Fund Ltd. (Citadel). In accordance with the preferred stock purchase agreement between Citadel and the Company and our Fourth Amended and Restated Certificate of Incorporation, the shares of Series B Preferred Stock owned by Citadel are convertible upon the our initial public offering into a combination of our Class A common stock and Class B common stock. The Class A common stock component issued upon the conversion of the Series B Preferred Stock in connection with our initial public offering cannot exceed 8.49% of the total Class A common stock outstanding (after taking into account any initial public offering allocation to Citadel) with any excess shares issued being issued to Citadel as Class B common stock. The Class B common stock is convertible into Class A common stock in Citadel's discretion but subject to the limitations described below under "Description of Capital Stock." Citadel Advisors LLC (Citadel Advisors) is the portfolio manager of Citadel. Citadel Advisors Holdings LP (CAH) is the sole member of Citadel Advisors. Citadel GP LLC (CGP) is the general partner of CAH. Kenneth Griffin owns a controlling interest in CGP. Mr. Griffin, as the owner of a controlling interest in CGP, may be deemed to have shared power to vote or direct the vote of, and/or shared power to dispose or to direct the disposition over, the shares held by Citadel. The foregoing should not be construed as an admission that Mr. Griffin or any of the Citadel related entities is the beneficial owner of any of our securities other than the securities actually owned by such person (if any). The address for Citadel is 131 S Dearborn St, 32nd Floor, Chicago, IL 60603.

(2) Consists of (i) 276,920 shares of our Class A common stock issuable upon conversion of our Series B Preferred Stock directly held of record by Cormorant Global Healthcare Master Fund, LP, (ii) 927,495 shares of our Class A common stock issuable upon conversion of our Series B Preferred Stock directly held of record by Cormorant Private Healthcare Fund III, LP and (iii) 11,748 shares of our Class A common stock issuable upon conversion of our Series B Preferred Stock directly held of record by CRMA SPV, LP. Cormorant Asset Management, LP is the investment manager to Cormorant Private Healthcare Fund III, LP, Cormorant Global Healthcare Master Fund, LP and CRMA SPV, LP, and, in such capacity, exercises shared voting and dispositive power over the securities held of record by the entities affiliated with Cormorant Asset Management, LP and may be deemed to beneficially own such securities. Bihua Chen serves as the managing member of Cormorant Asset Management, LP and as such shares voting and dispositive power over the securities held by the entities affiliated with Cormorant Asset Management, LP. The principal address for the Cormorant Asset Management, LP entities is 200 Clarendon Street 52nd Floor, Boston, Massachusetts 02116.

(3) Consists of (i) 88,395 shares of our Class A common stock, (ii) 409,289 shares of our Class A common stock issuable upon conversion of the Series A Preferred Stock, and (iii) 291,878 shares of our Class A common stock issuable upon conversion of the Series B Preferred Stock held of record by Merrin Investors LLC. Seth Merrin is the managing member of Merrin Investors LLC and as such shares voting and dispositive power over the securities held of record by Merrin Investors LLC. The address for Mr. Merrin and Merrin Investors LLC is c/o Block & Anchin LLP, 1375 Broadway 16th Floor, New York, New York 10018.

(4) Consists of (i) 145,940 shares of our Class A common stock issuable upon conversion of our Series B Preferred Stock directly held of record by Four Pines Master Fund LP, and (ii) 632,405 shares of our Class A common stock issuable upon conversion of our Series B Preferred Stock directly held of record by Rock Springs Capital Master Fund LP. Kris Jenner, Mark Bussard and Graham

McPhail, as principals of Rock Springs Capital, jointly exercise voting and investment power with respect to the shares held by Four Pines Master Fund LP and Rock Springs Capital Master Fund LP. Each of Messrs. Jenner, Bussard and McPhail disclaims any beneficial ownership of the shares held by Four Pines Master Fund LP and Rock Springs Capital Master Fund LP. The address for Messrs. Jenner, Bussard and Graham McPhail and these entities is 650 South Exeter Street, Suite 1070, Baltimore, Maryland 21202.

(5) Consists of (i) 31,206 shares of our Class A common stock issuable upon conversion of the Series B Preferred Stock held of record by T. Rowe Price Health Sciences Portfolio, (ii) 696,164 shares of our Class A common stock issuable upon the conversion of the Series B Preferred Stock held of record by T. Rowe Price Health Sciences Fund, Inc., and (iii) 50,975 shares of our Class A common stock issuable upon conversion of the Series B Preferred Stock held of record by TD Mutual Funds—TD Health Sciences Fund. The foregoing accounts are advised or sub-advised by T. Rowe Price Associates, Inc. (T. Rowe Price) a registered investment advisor. T. Rowe Price serves as investment advisor or subadvisor, as applicable, with power to direct investments and/or sole power to vote the securities owned by the accounts (with the exception of one subadvisory fund that retains its own voting authority). Although T. Rowe Price may be deemed to be the beneficial owner of all the shares listed, T. Rowe Price expressly disclaims beneficial ownership of such securities. T. Rowe Price Investment Services, Inc., or TRPIS, a registered broker-dealer (and FINRA member), is a subsidiary of T. Rowe Price Associates, Inc., the investment advisor or subadvisor, as applicable, to the accounts listed above. TRPIS was formed primarily for the limited purpose of acting as the principal underwriter and distributor of shares of the funds in the T. Rowe Price mutual fund family. TRPIS does not engage in underwriting or market-making activities involving individual securities. T. Rowe Price Associates, Inc. is the wholly owned subsidiary of T. Rowe Price Group, Inc., which is a publicly traded financial services holding company. The address for these entities is c/o T. Rowe Price Associates, Inc. 100 East Pratt Street, Baltimore, Maryland 21202, attention Andrew Baek, Vice President.

(6) Consists of (i) 1,820,766 shares of our Class A common stock, (ii) 29,234 shares of our Class A common stock issuable upon conversion of the Series A Preferred Stock, (iii) 5,837 shares of our Class A common stock issuable upon conversion of the Series B Preferred Stock, (iv) 150,000 shares of our Class A common stock underlying options exercisable within 60 days from June 30, 2021, and (v) 389,234 shares of our Class A common stock held of record by the Benjamin J. Zeskind 2020 Family Trust, where Lisa Schwartz, Dr. Zeskind's spouse, serves as sole trustee. Lisa Schwartz may be deemed to have sole voting and dispositive power with respect to the shares held of record by the Benjamin J. Zeskind 2020 Family Trust.

(7) Consists of (i) 2,338 shares of our Class A common stock issuable upon conversion of the Series A Preferred Stock, (ii) 1,945 shares of our Class A common stock issuable upon conversion of the Series B Preferred Stock, and (iii) 60,856 shares of our Class A common stock underlying options exercisable within 60 days from June 30, 2021.

(8) Consists of (i) 1,169 shares of our Class A common stock issuable upon conversion of the Series A Preferred Stock, (ii) 2,431 shares of our Class A common stock issuable upon conversion of the Series B Preferred Stock, and (iii) 115,812 shares of our Class A common stock underlying options exercisable within 60 days from June 30, 2021.

(9) Consists of (i) 433,333 shares of our Class A common stock, (ii) 67,561 shares of our Class A common stock issuable upon conversion of the Series A Preferred Stock, (iii) 87,563 shares of our Class A common stock issuable upon conversion of the Series B Preferred Stock, and (iv) 33,081 shares of our Class A common stock underlying options exercisable within 60 days from June 30, 2021.

(10) Consists of (i) 36,759 shares of our Class A common stock issuable upon conversion of the Series A Preferred Stock held of record by Feinberg Investment Trust LLC, (ii) 21,890 shares of our Class A common stock issuable upon conversion of the Series B Preferred Stock held of record by Feinberg Investment Trust LLC, (iii) 160,176 shares of our Class A common stock held of record by PEF LLC, (iv) 66,078 shares of our Class A common stock issuable upon conversion of the Series A Preferred Stock held of record by PEF LLC, (v) 21,890 shares of our Class A common stock issuable upon conversion of the Series B Preferred Stock held of record by PEF LLC, (vi) 88,395 shares of our Class A common stock held of record by PF Associates L.P., (vii) 73,519 shares of our Class A common stock issuable upon conversion of the Series A Preferred Stock held of record by PF Associates L.P., (viii) 21,890 shares of our Class A common stock issuable upon conversion of our Series B Preferred Stock held of record by PF Associates L.P., (ix) 36,759 shares of our Class A common stock issuable upon conversion of the Series A Preferred Stock held of record by S4K Investments LLC, (x) 21,890 shares of our Class A common stock issuable upon conversion of the Series B Preferred Stock held of record by S4K Investments LLC, and (xi) 33,081 shares of our Class A common stock underlying options exercisable within 60 days from June 30, 2021.

(11) Consists of 1,945 shares of our Class A common stock issuable upon conversion of the Series B Preferred Stock.

DESCRIPTION OF CAPITAL STOCK

General

At or prior to the consummation of this offering, we will file an amended and restated certificate of incorporation and we will adopt our amended and restated bylaws. Our amended and restated certificate of incorporation will authorize capital stock consisting of:

- shares of Class A common stock, $0.001 par value per share;
- shares of Class B common stock, $0.001 par value per share; and
- shares of preferred stock, $0.001 par value per share.

We are selling shares of Class A common stock in this offering (shares if the underwriters exercise their option to purchase additional shares of our Class A common stock in full). All shares of our Class A common stock outstanding upon consummation of this offering will be fully paid and non-assessable.

The following summary describes the material provisions of our capital stock. We urge you to read our amended and restated certificate of incorporation and our amended and restated bylaws, which are included as exhibits to the registration statement of which this prospectus forms a part.

Certain provisions of our amended and restated certificate of incorporation and our amended and restated bylaws summarized below may be deemed to have an anti-takeover effect and may delay or prevent a tender offer or takeover attempt that a stockholder might consider in its best interest, including those attempts that might result in a premium over the market price for the shares of Class A common stock.

Common Stock

Class A Common Stock

The holders of our Class A 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 Class A common stock do not have any cumulative voting rights. Holders of our Class A common stock are entitled to receive ratably any dividends declared by our board of directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Our Class A 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 Class A 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.

Upon our dissolution or liquidation, after payment in full of all amounts required to be paid to creditors and to the holders of preferred stock having liquidation preferences, if any, the holders of shares of our Class A common stock will be entitled to receive pro rata our remaining assets available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the prior rights of any preferred stock then outstanding.

Class B Common Stock

The Class B common stock is identical to our Class A common stock in all respects, except that the holders of our Class B common stock will not be entitled to vote on shareholder matters except as required by law. In addition, holders of our Class B common stock will have the right to convert each share of Class B common stock into one share of Class A common stock at the holder’s election, unless, as a result of such conversion, the holder and its affiliates would own more than 9.9% of the combined voting power of our outstanding share capital, and subject to certain additional restrictions as more particularly described in our amended and restated certificate of incorporation. Shares of Class B common stock, once converted to shares of Class A common stock, may not be converted back into shares of Class B common stock.

Preferred Stock

Upon the closing of this offering, (i) all outstanding shares of our Series A Preferred Stock and Series B Preferred Stock will be converted into shares of our Class A common stock, subject to certain beneficial ownership limitations, and (ii) all outstanding shares of our Series A Preferred Stock and Series B Preferred Stock will automatically be cancelled.

Upon the consummation of this offering, our board of directors 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 Class A common stock. The issuance of our preferred stock could adversely affect the voting power of holders of Class A common stock and the likelihood that such holders will receive 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.

Registration Rights

Under the IRA, following the consummation of this offering, certain holders of our common stock will be entitled to certain rights with respect to the registration of such shares for public resale under the Securities Act, until the rights otherwise terminate pursuant to the terms of the IRA. Pursuant to the IRA, beginning six months after the completion of this offering, the holders of up to shares of our Class A common stock, or certain transferees, will be entitled to certain rights with respect to the registration of the offer and sale of those shares under the Securities Act. The registration of shares of common stock as a result of the following rights being exercised would enable holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective.

Form S-1 Registration Rights

Pursuant to the IRA, certain holders of common stock are entitled to certain demand registration rights, including to demand registration of their registrable securities on a registration statement on Form S-1 at any time after the earlier of (i) five years after the date of the IRA, or (ii) 180 days following the completion of this offering. The holders holding more than a majority of the registrable securities have the right to require us to file a registration statement on Form S-1 under the Securities Act in order to register the resale of their shares of common stock; *provided*, that no such registration is required to be made (i) during the period that is 60 days before the Company's good faith estimate of the date of filing of, and ending on a date that is 180 days after the effective date of, a Company-initiated registration, (ii) at such time as we have effected one registration statement, or (iii) if the holders who initiated the registration request propose to dispose of shares of registrable securities that may be immediately registered on Form S-3 pursuant to a request under the IRA. We may, in certain circumstances, defer such registrations, and the underwriters have the right, subject to certain limitations, to limit the number of shares included in such registrations.

Piggyback Registration Rights

If at any time after this offering we propose to register any shares of our common stock under the Securities Act, subject to certain exceptions, the holders of registrable securities will be entitled to notice of the registration and to include their shares of registrable securities in the registration. If our proposed registration involves an underwriting, the managing underwriter of such offering will have the right to limit the number of shares to be underwritten for reasons related to the marketing of the shares.

Form S-3 Registration Rights

After we are qualified for registration on Form S-3, the holders, as holders of registrable securities, may make a written request that we register the offer and sale of their shares on a Form S-3 registration statement; *provided*, that no such registration is required to be made (i) during the period that is 30 days before the

Company's good faith estimate of the date of filing of, and ending on a date that is 90 days after the effective date of, a Company-initiated registration, or (ii) at such time as we have effected two such registrations in the last 12 months. We may, in certain circumstances, defer such registrations, and the underwriters have the right, subject to certain limitations, to limit the number of shares included in such registrations.

Expenses and Indemnification

Ordinarily, other than underwriting discounts and commissions, we will be required to pay all expenses incurred by us related to any registration effected pursuant to the exercise of these registration rights. These expenses may include all registration and filing fees, printing expenses, fees and disbursements of our counsel, reasonable fees and disbursements of a counsel for the selling securityholders and blue sky fees and expenses. Additionally, we have agreed to indemnify selling stockholders for damages, and any legal or other expenses reasonably incurred, arising from or based upon any untrue statement of a material fact contained in any registration statement, an omission or alleged omission to state a material fact in any registration statement or necessary to make the statements therein not misleading, or any violation or alleged violation by the indemnifying party of securities laws, subject to certain exceptions.

Termination of Registration Rights

The registration rights terminate upon the earliest of: (i) such date after the completion of this offering on which all shares of registrable securities may be sold during any three (3) month period pursuant to Rule 144 of the Securities Act, (ii) the first anniversary of the completion of this offering, or (iii) the occurrence of a deemed liquidation event.

Choice of Forum

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or stockholders to us or to our stockholders; (iii) any action asserting a claim against us arising pursuant to the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws (as either may be amended from time to time); and (iv) any action asserting a claim against us that is governed by the internal affairs doctrine. As a result, any action brought by any of our stockholders with regard to any of these matters will need to be filed in the Court of Chancery of the State of Delaware and cannot be filed in any other jurisdiction; provided that, the exclusive forum provision will not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction; and provided further that, if and only if the Court of Chancery of the State of Delaware dismisses any such action for lack of subject matter jurisdiction, such action may be brought in another state or federal court sitting in the State of Delaware. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause or causes of action against us or any defendant arising under the Securities Act. Such provision is intended to benefit and may be enforced by us, our officers and directors, employees and agents, including the underwriters and any other professional or entity who has prepared or certified any part of this prospectus. Nothing in our amended and restated certificate of incorporation and amended and restated bylaws preclude stockholders that assert claims under the Exchange Act from bringing such claims in state or federal court, subject to applicable law.

If any action the subject matter of which is within the scope described above is filed in a court other than a court located within the State of Delaware, or a Foreign Action, in the name of any stockholder, such stockholder shall be deemed to have consented to the personal jurisdiction of the state and federal courts located within the State of Delaware in connection with any action brought in any such court to enforce the applicable provisions of our amended and restated certificate of incorporation and amended and restated bylaws and having service of process made upon such stockholder in any such action by service upon such stockholder's counsel in the Foreign Action as agent for such stockholder. Although our amended and restated certificate of incorporation and amended and restated bylaws will contain the choice of forum provision

described above, it is possible that a court could find that such a provision is inapplicable for a particular claim or action or that such provision is unenforceable.

This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims or make such lawsuits more costly for stockholders, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder.

Dividends

Declaration and payment of any dividend will be subject to the discretion of our board of directors. The time and amount of dividends will be dependent upon our business prospects, results of operations, financial condition, cash requirements and availability, debt repayment obligations, capital expenditure needs, contractual restrictions, covenants in the agreements governing our current and future indebtedness, industry trends, the provisions of Delaware law affecting the payment of distributions to stockholders and any other factors our board of directors may consider relevant. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business and to repay indebtedness, and therefore do not anticipate declaring or paying any cash dividends on our common stock in the foreseeable future. See "Dividend Policy" and "Risk Factors—Risks Related to this Offering and Ownership of our Common Stock—We have never paid dividends on our capital stock and we do not intend to pay dividends for the foreseeable future. Consequently, any gains from an investment in our common stock will likely depend on whether the price of our common stock increases."

Anti-Takeover Provisions

Our amended and restated certificate of incorporation and amended and restated bylaws, as they will be in effect immediately prior to the consummation of this offering, will contain provisions that may delay, defer or discourage another party from acquiring control of us. We expect that these provisions, which are summarized below, will discourage coercive takeover practices or inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors, which we believe may result in an improvement of the terms of any such acquisition in favor of our stockholders. However, they also give our board of directors the power to discourage acquisitions that some stockholders may favor. See "Risk Factors—Risks Related to This Offering and Ownership of Our Common Stock—Our charter documents and Delaware law could prevent a takeover that stockholders consider favorable and could also reduce the market price of our stock."

Authorized but Unissued Shares

The authorized but unissued shares of our common stock and our preferred stock are available for future issuance without stockholder approval, subject to any limitations imposed by the listing standards of the Nasdaq Global Market. These additional shares may be used for a variety of corporate finance transactions, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could make more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Classified Board of Directors

Our amended and restated certificate of incorporation will provide that our board of directors will be divided into three classes, with the classes as nearly equal in number as possible and each class serving three-year staggered terms. In all other cases and at any other time, directors may only be removed from our board of directors for cause by the affirmative vote of a majority of the shares entitled to vote. See "Management—Composition of our Board of Directors." These provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control of us or our management.

Stockholder Action; Special Meeting of Stockholders

Our amended and restated certificate of incorporation will provide that our stockholders will not be able to take action by written consent for any matter and may only take action at annual or special meetings. As a

result, a holder controlling a majority of our capital stock would not be able to amend our amended and restated bylaws or remove directors without holding a meeting of our stockholders called in accordance with our amended and restated bylaws, unless previously approved by our board of directors. Our amended and restated certificate of incorporation will further provide that special meetings of our stockholders may be called only by the chairman of our board of directors, our chief executive officer, our president or another officer selected by a majority of our board of directors, thus limiting the ability of a stockholder to call a special meeting. These provisions might delay the ability of our stockholders to force consideration of a proposal or for stockholders controlling a majority of our capital stock to take any action, including the removal of directors.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

In addition, our amended and restated bylaws will establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of stockholders, including proposed nominations of candidates for election to our board of directors. In order for any matter to be "properly brought" before a meeting, a stockholder will have to comply with advance notice and duration of ownership requirements and provide us with certain information. Stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our board of directors or by a qualified stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely written notice in proper form to our secretary of the stockholder's intention to bring such business before the meeting. These provisions could have the effect of delaying stockholder actions that are favored by the holders of a majority of our outstanding voting securities until the next stockholder meeting.

Amendment of Certificate of Incorporation or Bylaws

The DGCL provides generally that the affirmative vote of the holders of a majority in voting power of the shares entitled to vote is required to amend a corporation's certificate of incorporation, unless a corporation's certificate of incorporation requires a greater percentage. Upon consummation of this offering, our bylaws may be amended or repealed by a majority vote of our board of directors or by the affirmative vote of the holders a majority of the votes which all our stockholders would be eligible to cast in an election of directors.

Section 203 of the DGCL

We are subject to Section 203 of the DGCL, which prohibits persons deemed "interested stockholders" from engaging in a "business combination" with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors, such as discouraging takeover attempts that might result in a premium over the market price of our common stock.

Limitations on Liability and Indemnification of Officers and Directors

Our amended and restated bylaws provide indemnification for our directors and officers to the fullest extent permitted by the DGCL, along with the right to have expenses incurred in defending proceedings paid in advance of their final disposition. Prior to the consummation of this offering, we intend to enter into indemnification agreements with each of our directors and executive officers that may, in some cases, be broader than the specific indemnification and advancement provisions contained under our amended and restated bylaws and provided under Delaware law. In addition, as permitted by Delaware law, our amended and restated certificate of incorporation includes provisions that eliminate the personal liability of our directors for monetary damages resulting from breaches of certain fiduciary duties as a director. The effect of

this provision is to restrict our rights and the rights of our stockholders to recover monetary damages against a director for breach of fiduciary duties as a director.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling our company pursuant to the foregoing provisions, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable.

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, our stockholders will have appraisal rights in connection with a merger or consolidation of Immuneering Corporation. Pursuant to the DGCL, stockholders who properly demand and perfect appraisal rights in connection with such mergers or consolidations will have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery, subject to certain limitations.

Stockholders' Derivative Actions

Under the DGCL, any of our stockholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, in certain circumstances. Among other things, either the stockholder bringing any such action must be a holder of our shares at the time of the transaction to which the action relates or such stockholder's stock must have thereafter devolved by operation of law, and such stockholder must continuously hold shares through the resolution of such action.

Transfer Agent and Registrar

The transfer agent and registrar for our Class A common stock is American Stock Transfer and Trust Company, LLC.

Trading Symbol and Market

We have applied to list our Class A common stock on the Nasdaq Global Market under the symbol "IMRX." We do not intend to list the Class B common stock on any securities exchange.

SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there was no public market for our Class A common stock. Future sales of substantial amounts of Class A common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our Class A common stock. Although we have applied to have our Class A common stock listed on the Nasdaq Global Market, we cannot assure you that there will be an active public market for our Class A common stock.

Upon the closing of this offering, we will have outstanding an aggregate of shares of common stock, assuming the issuance of shares of Class A common stock offered by us in this offering. Of these shares, all shares of Class A common stock sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares purchased by our "affiliates," as that term is defined in Rule 144 under the Securities Act, whose sales would be subject to the Rule 144 resale restrictions described below, other than the holding period requirement.

Lock-Up Agreements

We, our officers and directors and holders of substantially all of our Class A common stock and securities convertible into or exchangeable for our Class A common stock will agree that, without the prior written consent of Morgan Stanley & Co. LLC, Jefferies LLC and Cowen and Company, LLC, as representatives of the underwriters, we and they will not, subject to certain exceptions, during the period ending 180 days after the date of this prospectus:

- offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly or publicly disclose the intention to make any offer, sale, pledge or disposition of any shares of our Class A common stock, or any options or warrants to purchase any shares of our Class A common stock, or any securities convertible into, or exchangeable for, or that represent the right to receive, shares of our Class A common stock; or
- enter into any swap or other arrangement that transfers to another, all or a portion of the economic consequences of ownership of our Class A common stock or any securities convertible into or exercisable or exchangeable for shares of our Class A common stock,

whether any transaction described above is to be settled by delivery of our Class A common stock or such other securities, in cash or otherwise. Nothing in the lock-up agreements prevents the conversion of Class B common stock into Class A common stock.

The representatives of the underwriters have advised us that they have no present intent or arrangement to release any shares subject to a lock-up, and will consider the release of any lock-up on a case-by-case basis. Upon a request to release any shares subject to a lock-up, the representatives of the underwriters would consider the particular circumstances surrounding the request, including, but not limited to, the length of time before the lock-up expires, the number of shares requested to be released, reasons for the request, the possible impact on the market or our Class A common stock and whether the holder of our shares requesting the release is an officer, director or other affiliate of ours.

Upon the expiration of the applicable lock-up periods, substantially all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above.

Rule 144

Affiliate Resales of Restricted Securities

In general, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is an affiliate of ours, or who was an affiliate at any time during the 90 days before a sale, who has beneficially owned shares of our Class A common stock for at least 180 days would be entitled to sell in "broker's transactions" or certain "riskless principal transactions" or to market makers, a number of shares within any three-month period that does not exceed the greater of:

- 1% of the number of shares of our Class A common stock then outstanding; and
- the average weekly trading volume in our Class A common stock on the Nasdaq Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Affiliate resales under Rule 144 are also subject to the availability of current public information about us. In addition, if the number of shares being sold under Rule 144 by an affiliate during any three-month period exceeds 5,000 shares or has an aggregate sale price in excess of $50,000, the seller must file a notice on Form 144 with the SEC and Nasdaq concurrently with either the placing of a sale order with the broker or the execution directly with a market maker.

Non-Affiliate Resales of Restricted Securities

Under Rule 144, a person who is not an affiliate of ours at the time of sale, and has not been an affiliate at any time during the 90 days preceding a sale, and who has beneficially owned shares of our common stock for at least six months but less than a year, is entitled to sell such shares subject only to the availability of current public information about us. If such person has held our shares for at least one year, such person can resell without regard to any Rule 144 restrictions, including the 90-day public company requirement and the current public information requirement.

Non-affiliate resales are not subject to the manner of sale, volume limitation or notice filing provisions of Rule 144.

Rule 701

In general, under Rule 701, any of our employees, directors, officers, consultants or advisors who purchases shares from us in connection with a compensatory stock or option plan or other written agreement before the effective date of the registration statement of which this prospectus forms a part is entitled to sell such shares 90 days after such effective date in reliance on Rule 144. Our affiliates can resell shares in reliance on Rule 144 without having to comply with the holding period requirement, and non-affiliates of the issuer can resell shares in reliance on Rule 144 without having to comply with the current public information and holding period requirements.

The SEC has indicated that Rule 701 will apply to typical stock options granted by an issuer before it becomes subject to the reporting requirements of the Exchange Act, along with the shares acquired upon exercise of such options, including exercises after an issuer becomes subject to the reporting requirements of the Exchange Act.

Registration Rights

Pursuant to our IRA, beginning six months after the completion of this offering, the holders of up to shares of our Class A common stock, or certain transferees, will be entitled to certain rights with respect to the registration of the offer and sale of those shares under the Securities Act. See the section titled “Description of Capital Stock—Registration Rights” for a description of these registration rights. If the offer and sale of these shares of our Class A common stock are registered, the shares will be freely tradable without restriction under the Securities Act, subject to the Rule 144 limitations applicable to affiliates, and a large number of shares may be sold into the public market.

Directed Share Program

At our request, the DSP Underwriter has reserved for sale, at the initial public offering price, up to % of the shares of our Class A common stock offered hereby for officers, directors, employees and certain related persons. Shares purchased through the directed share program will not be subject to lockup restrictions with the underwriters, except in the case of shares purchased by any of our directors or executive officers. See “Underwriting—Directed Share Program.”

Registration Statements on Form S-8

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of Class A common stock subject to outstanding stock options, RSUs, warrants and Class A common stock issuable, under our equity incentive plans. We expect to file the registration statement covering shares offered pursuant to these stock plans shortly after the date of this prospectus, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market subject to compliance with the resale provisions of Rule 144.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to non-U.S. holders (as defined below) of the purchase, ownership and disposition of our Class A common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or foreign tax laws are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended (the "Code"), Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service, or IRS, in effect as of the date of this offering. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a non-U.S. holder of our Class A common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position regarding the tax consequences of the purchase, ownership and disposition of our Class A common stock.

This discussion is limited to non-U.S. holders that hold our Class A common stock as a "capital asset" within the meaning of Section 1221 of the Code (property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a non-U.S. holder's particular circumstances, including the impact of the alternative minimum tax, the unearned income Medicare contribution tax, or any state, local or non-U.S. taxes. In addition, it does not address consequences relevant to holders subject to particular rules, including, without limitation:

- U.S. expatriates and certain former citizens or long-term residents of the United States;
- persons holding our Class A common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies, and other financial institutions;
- brokers, dealers or traders in securities or currencies;
- "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;
- corporations organized outside of the United States, any state thereof or the District of Columbia that are nonetheless treated as U.S. taxpayers for U.S. federal income tax purposes;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our Class A common stock under the constructive sale provisions of the Code;
- persons for whom our Class A common stock constitutes "qualified small business stock" within the meaning of Section 1202 of the Code;
- persons who hold or receive our Class A common stock pursuant to the exercise of any employee stock 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 subject to special tax accounting rules as a result of any item of gross income with respect to our Class A common stock being taken into account in an applicable financial statement; and
- tax-qualified retirement plans.

If an entity or arrangement treated as a partnership for U.S. federal income tax purposes holds our Class A common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our Class A common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT LEGAL OR TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR CLASS A COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a "non-U.S. holder" is any beneficial owner of our Class A common stock that is neither a "U.S. person," nor an entity or arrangement treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a U.S. court and which has one or more U.S. persons (within the meaning of Section 7701(a)(30) of the Code) who have the authority to control all substantial decisions of the trust, or (2) has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

Distributions

As described in the section titled "Dividend Policy," we do not anticipate declaring or paying dividends to holders of our Class A common stock in the foreseeable future. However, if we do make distributions on our Class A common stock, such distributions of cash or property on our Class A common stock 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 constitute a return of capital and first be applied against and reduce a non-U.S. holder's adjusted tax basis in its Class A common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under "—Sale or Other Taxable Disposition of Class A Common Stock."

Subject to the discussion below on backup withholding and foreign accounts, dividends paid to a non-U.S. holder of our Class A common stock that are not effectively connected with the non-U.S. holder's conduct of a trade or business within the United States 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 claim a reduction in or exemption from withholding, the non-U.S. holder must provide the applicable withholding agent with a properly executed (a) IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) claiming an exemption from or reduction of the withholding tax under the benefit of an income tax treaty between the United States and the country in which the non-U.S. holder resides or is established, or (b) IRS Form W-8ECI stating that the dividends are not subject to withholding tax because they are effectively connected with the conduct by the non-U.S. holder of a trade or business within the United States, as may be applicable. Non-U.S. holders that do not timely provide the applicable withholding agent with the required certification, but that qualify for a reduced rate under an applicable income tax treaty, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a non-U.S. holder are effectively connected with the non-U.S. holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the non-U.S. holder maintains a permanent establishment in the United States to which such dividends are attributable), then, although exempt from U.S. federal withholding tax (provided the non-U.S. holder provides appropriate

certification, as described above), the non-U.S. holder will be subject to U.S. federal income tax on such dividends on a net income basis at the regular U.S. federal income tax rates. In addition, a non-U.S. holder that is a corporation may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits for the taxable year that are attributable to such dividends, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under any applicable tax treaty.

Sale or Other Taxable Disposition of Class A Common Stock

Subject to the discussions below on backup withholding and foreign accounts, a non-U.S. holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our Class A common stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the non-U.S. holder maintains a permanent establishment in the United States to which such gain is attributable);
- the non-U.S. holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our Class A common stock constitutes U.S. a real property interest, or USRPI, by reason of our status as a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above will generally be subject to U.S. federal income tax on a net income basis at the regular U.S. federal income tax rates. A non-U.S. holder that is a foreign corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits, as adjusted for certain items.

A non-U.S. holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on any gain realized upon the sale or other taxable disposition, which 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 the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we are not currently and do not anticipate becoming a USRPHC. Because the determination of whether we are a USRPHC depends on the fair market value of our USRPIs relative to the fair market value of our other business assets and our non-U.S. real property interests, however, there can be no assurance we are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a non-U.S. holder of our Class A common stock will not be subject to U.S. federal income tax if our Class A common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such non-U.S. holder owned, actually and constructively, 5% or less of our Class A common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the non-U.S. holder's holding period.

Non-U.S. holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

A non-U.S. holder will not be subject to backup withholding with respect to distributions on our Class A common stock we make to the non-U.S. holder, provided the applicable withholding agent does not have actual knowledge or reason to know such holder is a U.S. person and the holder certifies its non-U.S. status, such as by providing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or other applicable certification, or otherwise establishes an exemption. However, information returns generally will be filed with the IRS in connection with any distributions made on our Class A common stock to the non-U.S. holder, regardless of whether such distributions constitute dividends or whether any tax was actually withheld. Copies of these information returns may also be made available under the provisions of a specific treaty or agreement to the tax authorities of the country in which the non-U.S. holder resides or is established.

Information reporting and backup withholding may apply to the proceeds of a sale or other taxable disposition of our Class A common stock within the United States, and information reporting may (although backup withholding generally will not) apply to the proceeds of a sale or other taxable disposition of our Class A common stock outside the United States conducted through certain U.S.-related financial intermediaries, in each case, unless the beneficial owner certifies under penalty of perjury that it is a non-U.S. holder on IRS Form W-8BEN or W-8BEN-E, or other applicable form (and the payor does not have actual knowledge or reason to know that the beneficial owner is a U.S. person) or such owner otherwise establishes an exemption. Proceeds of a disposition of our Class A common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a non-U.S. holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code, such Sections commonly referred to as the Foreign Account Tax Compliance Act, or FATCA, on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends paid on our Class A common stock, or (subject to the proposed Treasury Regulations discussed below) gross proceeds from the sale or other disposition of our Class A common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code) (including, in some cases, when such foreign financial institution or non-financial foreign entity is acting as an intermediary), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends paid on our Class A common stock. While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of our Class A common stock, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued. Prospective investors should consult their tax advisors regarding the potential application of FATCA to their investment in our Class A common stock.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC, Jefferies LLC and Cowen and Company, LLC are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares of Class A common stock indicated below:

Name	Number of Shares of Class A Common Stock
Morgan Stanley & Co. LLC	
Jefferies LLC	
Cowen and Company, LLC	
Guggenheim Securities, LLC	
Total:	

The underwriters and the representatives are collectively referred to as the "underwriters" and the "representatives," respectively. The underwriters are offering the shares of Class A common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of Class A common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of Class A common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option described below.

The underwriters initially propose to offer part of the shares of Class A common stock directly to the public at the initial public offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of $ per share under the public offering price. After the initial offering of the shares of Class A common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of Class A common stock at the initial public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of Class A common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of Class A common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of Class A common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional shares of Class A common stock.

	Per Share	Total	
		No Exercise	Full Exercise
Initial public offering price	$	$	$
Underwriting discounts and commissions:			
Proceeds, before expenses, to us	$	$	$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately $. We have agreed to reimburse the underwriters for expenses relating to clearance of this offering with the Financial Industry Regulatory Authority up to $35,000.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of Class A common stock offered by them.

We have applied to list our Class A common stock on the Nasdaq Global Market under the symbol "IMRX." We do not intend to list the Class B common stock on any securities exchange.

We have agreed that, without the prior written consent of the representatives on behalf of the underwriters, we will not, and will not publicly disclose an intention to, during the period ending 180 days after the date of this prospectus, or the restricted period:

- 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, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our Class A common stock or any securities convertible into or exercisable or exchangeable for shares of Class A common stock;
- file any registration statement with the SEC relating to the offering of any shares of Class A common stock or any securities convertible into or exercisable or exchangeable for Class A common stock; or
- enter into any swap, hedge, option, derivative or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our Class A common stock.

whether any such transaction described above is to be settled by delivery of our Class A common stock or such other securities, in cash or otherwise.

The restrictions described in the immediately preceding paragraph do not apply to us in certain circumstances, subject to certain limitations and conditions set forth in the underwriting agreement, including: .

Our directors and officers and the holders of substantially all of our outstanding stock have agreed that, without the prior written consent of the representatives on behalf of the underwriters, they will not, and will not publicly disclose an intention to, during the restricted period: (1) 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, lend, or otherwise transfer or dispose of, directly or indirectly, any common stock or any securities convertible into or exercisable or exchangeable for common stock, (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock, or (3) make any demand for or exercise any right with respect to the registration of any common stock or any security convertible into or exercisable or exchangeable for common stock. These restrictions do not apply in certain circumstances, subject to certain limitations and conditions set forth in the lock-up agreements, including: .

The representatives, in their sole discretion, may release the Class A common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the Class A common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the Class A common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any 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 Class A common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of Class A common stock in the open market to stabilize the price of the Class A common stock. These activities may raise or maintain the market price of the Class A common stock above independent market levels or prevent or retard a decline in the market price of the Class A common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of Class A common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

Other Relationships

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Pricing of the Offering

Prior to this offering, there has been no public market for our Class A common stock. The initial public offering price was determined by negotiations between us and the representatives. Among the factors considered in determining the initial public offering price were our future prospects and those of our industry in general, our sales, earnings and certain other financial and operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities, and certain financial and operating information of companies engaged in activities similar to ours.

Directed Share Program

At our request, the DSP Underwriter has reserved for sale, at the initial public offering price, up to % of the shares to be sold in this offering to our officers, directors, employees and certain related persons. The DSP Underwriter will receive the same underwriting discount on any shares purchased pursuant to this program as they will on any other shares sold to the public in this offering. The number of shares of Class A common stock available for sale to the general public will be reduced to the extent these individuals purchase such reserved shares. Any directed shares not purchased will be offered by the DSP Underwriter to the general public on the same basis as all other shares offered by this prospectus. Shares purchased through the directed share program will not be subject to lockup restrictions with the underwriters, except in the case of shares purchased by any of our directors or executive officers. We have agreed to indemnify the underwriters against certain liabilities and expenses, including liabilities under the Securities Act, in connection with the sales of the directed shares. Other than the underwriting discount described on the front cover of this prospectus, the underwriters will not be entitled to any commission with respect to the shares of Class A common stock sold pursuant to the directed share program.

Selling Restrictions

Canada

The Class A common stock may be sold 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 of our Class A common stock must be made in accordance with an exemption from, 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 for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts, or 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.

European Economic Area

This prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock is not a prospectus for the purposes of the Prospectus Regulation (as defined below). This prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock and any offer if made subsequently is directed only at persons in any Member State of the European Economic Area (the "EEA" and each such member state, a "Member State") who are "qualified investors" within the meaning of Article 2(e) of the Prospectus Regulation. This prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock has been prepared on the basis that any offer of Class A common stock in that Member State will be made pursuant to an exemption under the Prospectus Regulation from the requirement to publish a prospectus for offers of Class A common stock. Accordingly any person making or intending to make an offer in that Relevant State of Class A common stock which is the subject of the offering contemplated in this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock may only do so in circumstances in which no obligation arises for us or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Regulation in relation to such offer. Neither us nor the underwriters have authorized, nor do they authorize, the making of any offer of Class A common stock in circumstances in which an obligation arises for us or the underwriters to publish a prospectus for such offer.

In relation to each Member State, no securities which are the subject of the offering contemplated by this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock to the public may be made in that Member State other than:

(a) to any legal entity which is a qualified investor as defined in the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Regulation), subject to obtaining the prior consent of the representatives; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require us or any of the representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a 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, acknowledged and agreed to and with each of the representatives and us that it is a "qualified investor" as defined in the Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in Article 5(1) of the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a nondiscretionary 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 Member State to

qualified investors as so defined in the Prospectus Regulation or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

For the purposes of this provision, the expression an "offer of shares to the public" in relation to any shares in any Member State means the communication in any form and by means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129 (as amended).

United Kingdom

This prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock may not be distributed or circulated to any person in the United Kingdom other than to (i) persons who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Order"); and (ii) high net worth entities falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). This prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock is directed only at relevant persons. Other persons should not act on this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock. This prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock is confidential and is being supplied to you solely for your information and may not be reproduced, redistributed or passed on to any other person or published, in whole or in part, for any other purpose.

Any invitation or inducement to engage in investment activity (within the meaning of Section 21 of the United Kingdom's Financial Services and Markets Act 2000, as amended (the "FSMA")) in connection with the issue or sale of the Class A common stock may only be communicated or caused to be communicated in circumstances in which Section 21(1) of the FSMA does not apply to us.

All applicable provisions of the FSMA must be complied with in respect to anything done by any person in relation to the Class A common stock in, from or otherwise involving the United Kingdom.

In relation to the United Kingdom, no securities which are the subject of the offering contemplated by this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock to the public may be made in the United Kingdom other than:

(a) to any legal entity which is a qualified investor as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018, as amended by the European Union (Withdrawal Agreement) Act 2020 ("EUWA");

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA) in the United Kingdom subject to obtaining the prior consent of the representatives; or

(c) in any other circumstances falling within Section 86 of the FSMA,

provided that no such offer of no such offer of shares shall require us or any of the representatives to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA.

For the purposes of this provision, the expression "offer of shares to the public" in relation to any shares means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe for the shares.

Hong Kong

Our Class A common stock has not been and will 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, Laws of Hong Kong), (ii) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder or (iii) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap.32, Laws of Hong Kong). No advertisement, invitation or document relating to our Class A common stock has been or will be issued or has been or will 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 of our Class A common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder.

Israel

In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase Class A common stock under the Israeli Securities Law, 5728-1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728-1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions (the "Addressed Investors"); or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728-1968, subject to certain conditions (the "Qualified Investors"). The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The Company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728-1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our Class A common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Japan

No registration pursuant to Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended), or the FIEL, has been made or will be made with respect to the solicitation of the application for the acquisition of the Class A common stock.

Accordingly, the Class A common stock has not been, directly or indirectly, offered or sold and will not be, directly or indirectly, offered or sold in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, 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, and otherwise in compliance with, the FIEL and the other applicable laws and regulations of Japan.

For Qualified Institutional Investors or QII

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the Class A common stock constitutes either a "QII only private placement" or a "QII only secondary distribution" (each as described in Paragraph 1, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the Class A common stock. The Class A common stock may only be transferred to QIIs.

For Non-QII Investors

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the Class A common stock constitutes either a "small number private placement" or a "small number private secondary distribution" (each as is described in Paragraph 4, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the Class A common stock. The Class A common stock may only be transferred en bloc without subdivision to a single investor.

Singapore

This prospectus has not been and will not be registered as a prospectus under the Securities and Futures Act, Chapter 289 of Singapore (the "SFA") by the Monetary Authority of Singapore, and the offer of shares of our Class A common stock in Singapore is made primarily pursuant to the exemptions under Section 274 and 275 of the SFA. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock may not be circulated or distributed, nor may shares of our Class A common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor as defined in Section 4A of the SFA (an "Institutional Investor") pursuant to Section 274 of the SFA, (ii) to an accredited investor as defined in Section 4A of the SFA (an "Accredited Investor") or other relevant person as defined in Section 275(2) of the SFA (a "Relevant Person") and pursuant to Section 275(1) of the SFA, or to any person pursuant to an offer referred to in Section 275(1A) of the SFA, and in accordance with the conditions, specified in Section 275 of the SFA and (where applicable) Regulation 3 of the Securities and Futures (Classes of Investors) Regulations 2018, or (iii) otherwise pursuant to, and in accordance with, the conditions of any other applicable exemption or provision of the SFA.

It is a condition of the offer that where shares of our Class A common stock are subscribed for or acquired pursuant to an offer made in reliance on Section 275 of the SFA by a Relevant Person which is:

(a) a corporation (which is not an Accredited Investor), 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; or

(b) a trust (where the trustee is not an Accredited Investor), the sole purpose of which is to hold investments and each beneficiary of the trust is an individual who is an Accredited Investor,

securities or securities-based derivatives contracts (each as defined in Section 2(1) of the SFA) of that corporation and the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has subscribed for or acquired shares of our Class A common stock except:

1. to an Institutional Investor, an Accredited Investor, a Relevant Person, or which arises from an offer referred to in Section 275(1A) of the SFA (in the case of that corporation) or Section 276(4)(i)(B) of the SFA (in the case of that trust);

2. where no consideration is or will be given for the transfer;

3. where the transfer is by operation of law;

4. as specified in Section 276(7) of the SFA; or

5. as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

LEGAL MATTERS

The validity of the shares of Class A common stock offered hereby will be passed upon for us by Latham & Watkins LLP. Sidley Austin LLP, San Francisco, California has acted as counsel for the underwriters in connection with certain legal matters related to this offering.

EXPERTS

The consolidated financial statements of Immuneering Corporation as of December 31, 2020 and 2019 and for each of the years then ended appearing in this prospectus have been audited by RSM US LLP, an independent registered public accounting firm, as stated in their report thereon, and included in this prospectus and registration statement in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of Class A common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed with the registration statement. For further information about us and the Class A common stock offered hereby, we refer you to the registration statement and the exhibits filed with the registration statement. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement. The SEC also maintains an internet website that contains reports, proxy statements and other information about registrants, like us, that file electronically with the SEC. The address of that website is *www.sec.gov*.

Upon the closing of this offering, we will be required to file periodic reports, proxy statements, and other information with the SEC pursuant to the Exchange Act. These reports, proxy statements, and other information will be available on the website of the SEC referred to above.

We also maintain a website at *www.immuneering.com*, through which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessed through our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Immuneering Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Immuneering Corporation and its subsidiary (collectively, the Company) as of December 31, 2020 and 2019, the related consolidated statements of operations, convertible preferred stock and stockholders' deficit and cash flows for the years then ended, and the related notes to the consolidated financial statements (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

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 audits. 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 U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. 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 audits 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 audits 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 audits 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 audits provide a reasonable basis for our opinion.

/s/ RSM US LLP

We have served as the Company's auditor since 2020.

Boston, Massachusetts
May 13, 2021

IMMUNEERING CORPORATION AND SUBSIDIARY

CONSOLIDATED BALANCE SHEETS
December 31, 2020 and 2019

	2020	2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 37,090,151	$13,782,175
Accounts receivable	500,110	209,940
Prepaids and other current assets	140,958	71,218
Total current assets	37,731,219	14,063,333
Property and equipment, net	64,363	35,276
Right-of-use asset	613,103	—
Other assets	14,333	—
Total assets	**$ 38,423,018**	**$14,098,609**
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 1,480,537	$ 294,948
Accrued expenses	698,992	210,348
Lease liability, current	76,322	—
Total current liabilities	2,255,851	505,296
Long-term liabilities:		
Lease liability, noncurrent	544,767	—
Liability for Series A preferred stock	—	3,509,802
Total liabilities	2,800,618	4,015,098
Commitments and contingencies (Note 11)		
Convertible preferred stock:		
Series B preferred stock, $0.001 par value, 6,032,183 shares authorized, 3,619,292 and 0 shares issued and outstanding at December 31, 2020 and 2019, respectively, net of issuance costs	36,983,910	—
Series A preferred stock, $0.001 par value, 2,495,933 shares authorized, 2,495,933 and 1,966,043 shares issued and outstanding at December 31, 2020 and 2019, respectively, net of issuance costs	21,119,940	16,611,832
Total convertible preferred stock	58,103,850	16,611,832
Stockholders' deficit:		
Class A common stock, $0.001 par value, 15,733,000 shares authorized, 3,535,811 shares issued and outstanding at December 31, 2020 and 2019	3,536	3,536
Class B common stock, $0.001 par value, 6,032,183 shares authorized, 0 shares issued and outstanding at December 31, 2020 and 2019	—	—
Additional paid-in capital	3,252,654	2,165,885
Accumulated deficit	(25,737,640)	(8,697,742)
Total stockholders' deficit	(22,481,450)	(6,528,321)
Total liabilities, convertible preferred stock and stockholders' deficit	**$ 38,423,018**	**$14,098,609**

The accompanying notes are an integral part of these consolidated financial statements.

IMMUNEERING CORPORATION AND SUBSIDIARY

CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED DECEMBER 31, 2020 and 2019

	2020	2019
Revenue	$ 2,311,535	$ 1,919,709
Cost of revenue	1,280,325	1,222,970
Gross profit	1,031,210	696,739
Operating expenses		
Research and development	15,003,786	4,278,862
General and administrative	3,109,978	2,708,891
Total operating expenses	18,113,764	6,987,753
Loss from operations	(17,082,554)	(6,291,014)
Other income (expense)		
Interest Income	42,656	57,660
Interest expense	—	(351,302)
Loss on conversion of convertible notes	—	(1,124,792)
Net loss	**$(17,039,898)**	**$(7,709,448)**
Net loss per share attributable to common stockholders, basic and diluted	$ (4.82)	$ (2.18)
Weighted-average common shares outstanding, basic and diluted	3,535,811	3,535,811
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)	$ (2.78)	
Pro forma weighted-average common shares outstanding, basic and diluted (unaudited)	6,127,858	

The accompanying notes are an integral part of these consolidated financial statements.

IMMUNEERING CORPORATION AND SUBSIDIARY

CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
FOR THE YEARS ENDED DECEMBER 31, 2020 and 2019

	Convertible Preferred Stock					Stockholders' Deficit						
	Series B		Series A		Total Convertible Preferred Stock	Class A Common Stock		Class B Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount		Shares	Par Value	Shares	Par Value			
Balance at December 31, 2018	—	$ —	—	$ —	$ —	3,535,811	$3,536	—	$—	$ 830,220	$ (988,294)	$ (154,538)
Conversion of convertible notes and interest into Series A convertible preferred stock	—	—	785,706	6,718,886	6,718,886	—	—	—	—	—	—	—
Issuance of Series A convertible preferred stock, net of issuance costs	—	—	1,180,337	9,892,946	9,892,946	—	—	—	—	—	—	—
Issuance of common stock warrants pursuant to advisory agreements	—	—	—	—	—	—	—	—	—	739,034	—	739,034
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	596,631	—	596,631
Net loss	—	—	—	—	—	—	—	—	—	—	(7,709,448)	(7,709,448)
Balance at December 31, 2019	—	—	1,966,043	16,611,832	16,611,832	3,535,811	3,536	—	—	2,165,885	(8,697,742)	(6,528,321)
Issuance of Series A convertible preferred stock, net of issuance costs	—	—	529,890	4,508,108	4,508,108	—	—	—	—	—	—	—
Issuance of Series B convertible preferred stock, net of issuance costs	3,619,292	36,983,910	—	—	36,983,910	—	—	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	1,086,769	—	1,086,769
Net loss	—	—	—	—	—	—	—	—	—	—	(17,039,898)	(17,039,898)
Balance at December 31, 2020	3,619,292	$36,983,910	2,495,933	$21,119,940	$58,103,850	3,535,811	$3,536	—	$—	$3,252,654	$(25,737,640)	$(22,481,450)

The accompanying notes are an integral part of these consolidated financial statements.

IMMUNEERING CORPORATION AND SUBSIDIARY

CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2020 and 2019

	2020	2019
Cash flows from operating activities:		
Net loss	$(17,039,898)	$ (7,709,448)
Adjustment to reconcile to net loss to net cash used in operating activities:		
Depreciation	24,328	18,079
Right-of-use asset amortization	54,977	—
Non-cash interest expense	—	351,302
Stock based compensation expense	1,086,769	596,631
Non-cash warrant expense	—	739,034
Loss on conversion of notes	—	1,124,792
Change in assets and liabilities:		
(Increase) decrease in:		
Accounts receivable	(290,170)	614,105
Prepaid expenses and other current assets	(69,740)	(20,466)
Other assets	(14,333)	—
Increase (decrease) in:		
Accounts payable	1,185,589	270,496
Accrued expenses	488,644	37,990
Lease liability	(46,991)	—
Deferred revenue	—	(465,000)
Net cash used in operating activities	(14,620,825)	(4,442,485)
Cash flows from investing activities:		
Purchase of property and equipment	(53,415)	(20,526)
Net cash used in investing activities	(53,415)	(20,526)
Cash flows from financing activities:		
Proceeds from the issuance of Series A preferred stock, net of issuance costs	998,306	13,402,748
Proceeds from the issuance of Series B preferred stock, net of issuance costs	36,983,910	—
Proceeds from issuance of convertible notes payable	—	3,825,000
Payment of debt issuance costs	—	(56,242)
Net cash provided by financing activities	37,982,216	17,171,506
Net increase in cash and cash equivalents	23,307,976	12,708,495
Cash and cash equivalents at beginning of period	13,782,175	1,073,680
Cash and cash equivalents at end of period	$ 37,090,151	$13,782,175
Supplemental disclosures of noncash information:		
Conversion of convertible notes and interest into Series A preferred stock	$ —	$ 6,718,886
Reclassification of liability for Series A preferred stock	$ 3,509,802	$ —

The accompanying notes are an integral part of these consolidated financial statements.

IMMUNEERING CORPORATION AND SUBSIDIARY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 — Organization and Nature of Business

Immuneering Corporation, a Delaware corporation, ("Immuneering" or the "Company") was incorporated in 2008. The Company leverages bioinformatics to develop new medicines unlikely to be found by traditional drug discovery methods. The Company's current pipeline of drug candidates is focused on treating aspects of disease that have eluded conventional approaches. Utilizing its proprietary Disease Cancelling Technology, the Company's objective is to discover and develop medicines that reverse a disease signal across many relevant genes. Concurrent with its internal programs, the Company provides computational biology services to pharmaceutical and biotechnology companies. On October 30, 2019, Immuneering formed a wholly owned subsidiary, Immuneering Securities Corporation ("ISC"), a Massachusetts securities corporation, for the sole purpose of buying, selling and holding securities on the Company's behalf. Immuneering and ISC are collectively referred to as "the Company" throughout these consolidated financial statements.

Since inception, the Company has devoted substantially all of its efforts to business planning, service revenue generation, research and development, recruiting management and technical staff, and raising capital. The Company has financed its operations through service revenues, the issuance of convertible debt and the sale of convertible preferred stock and common stock.

The Company is subject to risks associated with any biotechnology company that has substantial expenditures for research and development. There can be no assurance that the Company's research and development program will be successful, that products developed will obtain necessary regulatory approval, and that any approved product will be commercially viable. In addition, the Company operates in an environment of rapid technological change and is largely dependent on the services of its employees, advisors, and consultants.

The Company has funded its operations primarily with proceeds from the sale of its capital stock and convertible notes. The Company has incurred recurring losses over the past several years and as of December 31, 2020, the Company had an accumulated deficit of $25,737,640. The Company expects to continue to generate operating losses for the foreseeable future. The future viability of the Company is dependent on its ability to raise additional capital to finance its operations. The Company's inability to raise capital as and when needed could have a negative impact on its financial condition and ability to pursue its business strategies. There can be no assurances that additional funding will be available on terms acceptable to the Company, or at all. Management estimates that its cash and cash equivalents of $37,090,151 as of December 31, 2020, along with the gross proceeds of $24,799,786 from the issuance of shares in the second tranche of Series B Preferred in April and May 2021 (Note 6) will enable it to meet our current operating plans for at least the next twelve months after the date that the financial statements were issued.

Note 2 — Summary of Significant Accounting Policies

Basis of Presentation: The consolidated financial statements have been prepared in accordance with accounting standards set by the Financial Accounting Standards Board ("FASB"). The FASB sets generally accepted accounting principles ("GAAP") to ensure the consolidated financial statements are consistently reported. References to GAAP issued by the FASB in these footnotes are to the FASB Accounting Standards Codifications ("ASC"). The consolidated financial statements include the accounts of the Company and its wholly owned subsidiary. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates: The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses during the reporting periods. Actual results could differ from those estimates. Significant estimates reflected in these consolidated financial statements included but are not limited to, the research and development expenses, determination of fair value of stock-based awards, the valuation of common stock, and the right-to-use assets and operating lease liability. Actual results could differ from these estimates.

Segments: Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker ("CODM") in making decisions regarding resource allocation and assessing performance. The Company's chief executive officer is

Note 2 — Summary of Significant Accounting Policies (Continued)

the CODM, and he uses consolidated financial information in determining how to allocate resources and assess performance. The Company has determined that it operates in one segment.

Cash and Cash Equivalents: Cash and cash equivalents are comprised of deposits at major financial banking institutions and highly liquid investments with an original maturity of three months or less at the date of purchase. Cash is maintained at Federal Deposit Insurance Company ("FDIC") insured financial institutions. At times, the Company has maintained cash in excess of FDIC limits, however it has not experienced any losses with respect to its cash balances. The Company regularly monitors the financial condition of the institutions in which it has depository accounts and believes the risk of loss is minimal.

Accounts Receivable: Accounts receivable are stated at the amount management expects to collect from outstanding balances. An allowance for doubtful accounts is estimated for those accounts receivable considered to be uncollectible based upon historical experience and management's evaluation of outstanding accounts receivable. Bad debts are written off against the allowance when identified. At December 31, 2020 and 2019 there was no allowance for doubtful accounts.

Concentration of Credit Risk: Financial instruments that potentially subject the Company to significant concentration of credit risk consist primarily of accounts receivable and revenue. To manage accounts receivable credit risk, the Company continuously evaluates the creditworthiness of its customers and the need for an allowance for potential credit losses. The Company has not experienced any losses in such accounts.

The following customers comprised 10% or more of the Company's total accounts receivable or revenues as of or for the period ended December 31, 2020 (customers with an asterisk are less than 10%):

	Year Ended December 31, 2020		As of December 31, 2020	
	Revenue	% of Total	Accounts Receivable	% of Total
Customer #1	$676,710	29.3%	$214,345	42.9%
Customer #2	$570,000	24.7%	$ 71,250	14.2%
Customer #3	$306,900	13.3%	*	*
Customer #4	$250,880	10.9%	$ 63,000	12.6%
Customer #5	*	*	$ 91,975	18.4%

The following customers comprised 10% or more of the Company's total accounts receivable or revenues as of or for the period ended December 31, 2019 (customers with an asterisk are less than 10%):

	Year Ended December 31, 2019		As of December 31, 2019	
	Revenue	% of Total	Accounts Receivable	% of Total
Customer #1	$630,000	32.8%	*	*
Customer #2	$559,140	29.1%	$102,240	48.7%
Customer #3	$224,400	11.7%	*	*
Customer #4	*	*	$ 54,300	25.9%
Customer #5	*	*	$ 21,300	10.1%

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 2 — Summary of Significant Accounting Policies (Continued)

Property and Equipment: Property and equipment are recorded at cost, net of accumulated depreciation. Expenditures for major replacements and improvements are capitalized, while expenditures for general repairs and maintenance are expensed as incurred. Upon retirements or disposition of property and equipment, the related cost and accumulated depreciation are removed from the consolidated balance sheet and any resulting gain or loss is recorded in the consolidated statement of operations. Depreciation is calculated using the straight-line method once assets are placed in service.

Asset Class	Estimated Useful Lives
Computer equipment	3 years
Furniture and fixtures	5 years

Impairment of Long-lived Assets: Periodically, the Company evaluates its long-lived assets, which consist primarily of property and equipment, for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the future undiscounted net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the asset exceeds the fair value of the asset. To date, no impairments have occurred.

Leases: In February 2016 the FASB issued Accounting Standards Update ("ASU") No. 2016-02, Leases (Topic 842) ("ASC 842"), a standard issued to increase transparency and comparability among organizations related to their leasing activities. This standard established a right-of-use model that requires the recognition of right-of-use assets and lease liabilities for most leases as well as provides disclosure with respect to certain qualitative and quantitative information related to a company's leasing arrangements to meet the objective of allowing users of financial statements to assess the amount, timing and uncertainty of cash flows arising from leases.

The Company adopted the leasing standard using the modified retrospective transition approach as of January 1, 2020, with no restatement of prior periods or cumulative adjustment to retained earnings. Upon adoption, the Company elected the package of transition practical expedients, which allowed the Company to carry forward prior conclusions related to whether any expired or existing contracts are or contain leases, the lease classification for any expired or existing leases, and initial direct costs for existing leases. The Company also made an accounting policy election to not recognize leases with an initial term of 12 months or less within its consolidated balance sheets, and to recognize those lease payments on a straight-line basis in its consolidated statements of operations over the lease term. The adoption of the leasing standard did not have an impact on the consolidated statement of operations.

The Company determines if an arrangement is a lease at contract inception. Right-of-use assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease. Right-of-use assets and lease liabilities are recognized at the commencement date of the lease based upon the present value of future lease payments over the expected lease term. When determining the lease term, the Company includes options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. As most of the Company's leases do not provide an implicit interest rate, the Company uses its incremental borrowing rate, which is based on rates that would be incurred to borrow on a collateralized basis over a term equal to the lease payments in a similar economic environment, in determining the present value of lease payments.

The Company has elected not to separate lease and non-lease components as a single lease component. The Company's lease is reflected in right-of-use asset and lease liabilities (current and non-current) in the consolidated balance sheets. The right-of-use assets and lease liabilities were $61,822 upon adoption on

Note 2 — Summary of Significant Accounting Policies (Continued)

January 1, 2020. Fixed rents are included in the calculation of the lease balances while variable costs paid for certain operating and pass-through costs are excluded. Lease expense is recognized on a straight-line basis over the lease term.

Convertible preferred stock: The Company has classified convertible preferred stock ("Preferred Stock") as temporary equity in the accompanying consolidated balance sheets due to certain changes in control events that are outside of the Company's control, including transfer of control of the Company, where holders of the Preferred Stock could cause redemption of the shares in these situations. The Company does not accrete the carrying values of the Preferred Stock to the redemption values since a liquidation event was not considered probable as of December 31, 2020 and 2019. Subsequent adjustments of the carrying values to the redemption values will be made only if it becomes probable that such a liquidation event will occur.

Revenue Recognition: Effective January 1, 2019, the Company adopted ASC 606, Revenue from Contracts with Customers ("ASC 606") using the modified retrospective transition method applied to those contracts that were not completed as of that effective date and all contracts thereafter. The adoption did not have an impact on the financial statements.

In accordance with ASC 606, revenue is recognized when a customer obtains control of promised goods and services. The core principle of the standard is to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. To achieve that core principle, the Company applies the following five-step model:

- Identify the contract with a customer
- Identify the performance obligations in the contract
- Determine the transaction price
- Allocate the transaction price to the performance obligations in the contract
- Recognize revenue when or as performance obligations are satisfied

The Company's contracts generally consist of the promise to provide computational biology professional services to pharmaceutical and biotechnology companies, which the Company has concluded constitutes one performance obligation that is delivered over time. The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring the services to the customer. The Company's contracts provide for either agreed upon rates per hour based on the level of the professional working on the project or a fixed fee for a defined scope of work. The Company recognizes revenue over time by measuring the progress toward complete satisfaction of the performance obligation using a single method of measuring progress, which depicts the performance in transferring control of the associated services to the customer. The Company uses input methods to measure the progress toward the complete satisfaction of performance obligations and evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenue and net loss in the period of adjustment.

The Company's contract terms do not allow for a right of return or refund and do not contain significant financing components. Receivables associated with the contract will generally be collected within thirty to sixty days, in accordance with the underlying payment terms.

Income Taxes: The Company provides for income taxes in accordance with ASC Topic 740, Income Taxes. Deferred tax assets and liabilities are determined based on the difference between the financial reporting and tax bases of assets and liabilities using enacted tax rates and laws in effect in the years in which the differences are expected to reverse. A valuation allowance is provided if, based upon the weighted available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

Note 2 — Summary of Significant Accounting Policies (Continued)

The Company provides reserves for potential payments of tax to various tax authorities related to uncertain tax positions when management determines that it is probable that a loss will be incurred related to these matters and the amount of the loss is reasonably determinable. The Company has not identified any significant uncertain tax positions as of December 31, 2020 or 2019.

Research and Development: Research and development costs are expensed as incurred. Research and development costs consist of expenses incurred in performing research and development activities, including salaries and benefits, materials and supplies, preclinical expenses, stock-based compensation expense, depreciation of equipment, contract services, and other outside expenses. The Company also incurs costs to develop software programs for internal use in identifying potential human drug targets which may then lead to the development of human drug candidates. To date the software programs have primarily been used for internal research and development activities and the costs incurred have been expensed as research and development.

Stock-based Compensation: The Company issues stock-based awards to employees and nonemployees in the form of stock options. The Company accounts for stock-based awards in accordance with ASC 718, Compensation — Stock Compensation ("ASC 718"), which requires all stock-based payments to employees and nonemployees, including grants of employee stock options and modifications to existing stock options, to be recognized in the consolidated statement of operations based on their fair values.

The fair value of options is estimated on the grant date using the Black-Scholes option-pricing model ("Black-Scholes"). Black-Scholes requires the Company to make assumptions and judgments about the variables used in the calculation including the expected term of its stock option, the volatility of the Company's common stock, and an assumed risk-free interest rate. The Company uses the simplified calculation of expected life and volatility is based on an average of the historical volatility of a group of publicly traded companies in a similar industry that the Company believes would be considered a peer group had it been a publicly held company. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the option. Forfeitures are recognized as they occur. No dividend yield was assumed as the Company does not pay, and does not expect to pay, dividends on its common stock. The assumptions underlying these valuations represent management's best estimates, which involve inherent uncertainties and the application of management's judgement.

In accordance with ASU No. 2018-07, Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting, compensation expense for stock-based awards granted to nonemployees is recognized over the period during which services are rendered by such nonemployees. The new standard largely aligns the accounting for share-based payment awards issued to employees and nonemployees by expanding the scope of ASC 718 to apply to nonemployee share-based transactions, as long as the transaction is not effectively a form of financing. There was no adjustment to the financial statements upon adoption of this standard as of January 1, 2020.

As there has been no public market for the Company's common stock to date, the estimated fair value of its common stock has been determined by its board of directors as of the date of each option grant, with input from management, considering the Company's most recently available third-party valuations of common stock and its board of directors' assessment of additional objective and subjective factors that it believed were relevant and which may have changed from the date of the most recent valuation through the date of the grant. These third-party valuations were performed 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. Each valuation methodology includes estimates and assumptions that require the Company's judgment. These estimates and assumptions include a number of objective and subjective factors, including external market conditions, the prices at which the Company sold shares of preferred stock, the superior rights and preferences of securities senior to the Company's common stock at the time of, and the likelihood of, achieving a liquidity event, such as an initial public offering or sale.

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 2 — Summary of Significant Accounting Policies (Continued)

The assumptions underlying these valuations represent management's best estimates, which involve inherent uncertainties and the application of management's judgment. As a result, if the Company had used different assumptions or estimates, the fair value of its common stock and its stock-based compensation expense could be materially different.

Fair Value of Financial Instruments: The Company follows the guidance prescribed by ASC Topic 820, Fair Value Measurements ("ASC 820"), which establishes a framework for measuring fair value, and expands disclosures about fair value measurements. The standard provides a consistent definition of fair value which focuses on an exit price which is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The standard establishes a three-level hierarchy for fair value measurements based on the nature of inputs used in the valuation of an asset or liability as of the measurement date.

Level 1: Pricing inputs are quoted prices available in active markets for identical investments as of the reporting date.

Level 2: Pricing inputs are quoted prices for similar investments, or inputs that are observable, either directly or indirectly, for substantially the full term through corroboration with observable market data. The Company does not have any instruments meeting the criteria of Level 2 inputs.

Level 3: Pricing inputs include unobservable inputs that reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing the asset or liability, which are developed based on the best information available. The Company does not have any instruments meeting the criteria of Level 3 inputs.

To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized as Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The carrying amounts reflected in the consolidated balance sheets for cash, accounts payable and accrued expenses approximate their respective fair values because of the short-term maturity of those financial instruments. As of December 31, 2020 and 2019, the Company only holds Level 1 cash equivalents, which consist of money market funds of $36,842,373 and $13,375,975, respectively.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. The Company is an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended (Jobs Act). 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. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. The Company elected to avail itself of this extended transition period and, as a result, we will not be required to adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

In June 2016, the FASB issued ASU 2016-13, Financial Instruments — Credit Losses (Topic 326): Measurement of Credit Losses on Financial Statements. The new standard, as amended, requires that expected credit losses relating to financial assets measured on an amortized cost basis and available-for-sale debt securities be recorded through an allowance for credit losses. It also limits the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 2 — Summary of Significant Accounting Policies (Continued)

also requires the reversal of previously recognized credit losses if fair value increases. The targeted transition relief standard allows filers an option to irrevocably elect the fair value option of ASC 825-10, Financial Instruments-Overall, applied on an instrument-by-instrument basis for eligible instruments. ASU No. 2016-13, Financial Instruments — Credit Losses (Topic 326) will become effective for the Company on January 1, 2023. The Company is currently evaluating the impact of adopting this new accounting guidance.

In December 2019, the FASB issued ASU No. 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes, which simplifies the accounting for income taxes by removing certain exceptions to the general principles in the existing guidance for income taxes and making other minor improvements. The amendments are effective for annual reporting periods beginning after December 15, 2020 with early adoption permitted. The Company is currently evaluating the impact of adopting this new accounting guidance.

Note 3 — Property and Equipment

Property and equipment consisted of the following at December 31, 2020 and 2019:

	2020	2019
Computer equipment	$ 174,317	$ 139,700
Furniture and fixtures	18,798	—
Total	193,115	139,700
Accumulated depreciation	(128,752)	(104,424)
Property and equipment, net	$ 64,363	$ 35,276

Depreciation expense totaled $24,328 and $18,079 for the years ended December 31, 2020 and 2019, respectively.

Note 4 — Accrued Expenses

Accrued expenses consisted of the following at December 31, 2020 and 2019:

	2020	2019
Accrued professional expenses	$269,302	$ 91,632
Accrued employee expenses	163,668	118,716
Accrued contract research expenses	266,022	—
	$698,992	$210,348

Note 5 — Convertible Notes Payable

During the years ended December 31, 2018 and 2019, the Company entered into convertible promissory note agreements (“Convertible Notes”) for an aggregate amount of $1,450,000 and $3,825,000, respectively. The Convertible Notes accrued interest at 6% per annum and became payable upon demand any time on or after September 30, 2019. All repayments must first have been applied to accrued interest and then to the outstanding principal balance, and required prior written consent from the noteholders for advanced repayment.

The Convertible Notes contained multiple conversion features including qualified financing, non-qualified financing, liquidation event and voluntary conversion. All of the Convertible Notes contained a provision whereby the notes were automatically convertible upon a qualified financing with gross proceeds in excess of $4,000,000 at a conversion rate of 80% of the per share price paid by investors in the financing.

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 5 — Convertible Notes Payable (Continued)

Upon the occurrence of a non-qualified financing, all of the Convertible Notes were convertible at the option of the holders, at a conversion rate of 80% of the per share price paid by investors in the financing. Upon the occurrence of a liquidation event, the Convertible Notes would be settled with a cash repayment equal to two times the principal balance. Lastly, at any time on or after the second anniversary of the demand date, the Convertible Notes were eligible for voluntary conversion into common stock at a conversion rate of 80% of the per share fair market value.

The Company evaluated all the settlement features included within the convertible note agreements, noting that none of the features was considered to be predominant. The Company also evaluated all features under ASC Topic 815, Derivatives and Hedging ("ASC 815"), and determined all features met the definition of a derivative and required bifurcation. The derivative was recorded at fair value based on the occurrence of a triggering event taking place during the term of the notes.

For the year ended December 31, 2019 non-cash interest expense was $351,302 and issuance costs totaled $56,242.

In conjunction with the issuance of Series A Preferred in September 2019 (Note 6) the Convertible Notes with embedded derivatives and accrued interest totaling $5,375,167 were converted at a price of 80% of the Series A Preferred per share price, or $6.84 for total conversion value of $6,718,886. In connection with the conversion of the Convertible Notes and related interest, the Company also recorded extinguishment costs of $53,201 related to the unamortized issuance costs and a final fair value adjustment to the related derivative liability by recording a gain of $21,280. Upon extinguishment of the Convertible Notes, accrued interest and derivative liability, the Company recorded a loss of $1,124,792.

As of December 31, 2020 and 2019, there was no outstanding balance for Convertible Notes nor related derivatives since the Convertible Notes were converted prior to December 31, 2019.

The following table shows changes to the carrying values of the Convertible Notes and associated embedded derivatives for the year ended December 31, 2019:

	Convertible Notes Payable	Embedded Derivatives
Balance at December 31, 2018	$ 1,098,867	$ 378,351
Issuance of additional convertible notes payable	2,838,279	986,721
Accretion of debt discount	345,077	—
Change in fair value	—	(21,280)
Extinguishment	(4,282,223)	(1,343,792)
Balance at December 31, 2019	$ —	$ —

Note 6 — Convertible Preferred Stock

Series A Preferred Stock

In September 2019, the Company authorized the sale and issuance of up to 1,987,979 shares of Series A Preferred Stock, $0.001 par value per share, at an original issuance price of $8.5514 per share. In January 2020, the number of shares authorized for the Series A Preferred Stock was increased to 2,495,933 shares. The Series A Preferred Stock financing was structured to be issued in rolling closes during 2019 and 2020.

On September 20, 2019, the Company issued an additional 1,122,458 shares of Series A Preferred Stock for gross cash proceeds of $9,598,847 and issued 785,706 shares of Series A Preferred Stock in conjunction with the conversion of the outstanding amount of the Convertible Notes (Note 5). In 2019, the Company incurred issuance costs of $200,587 in connection with this offering.

Note 6 — Convertible Preferred Stock (Continued)

The Company received funds for issuance of an additional 468,315 shares of Series A Preferred Stock for gross cash proceeds of $4,004,975 through December 31, 2019. Of these shares, 410,436 shares of Series A Preferred Stock for gross cash proceeds of $3,509,802 exceeded the authorized amount allowed by the articles of incorporation, resulting in a liability of $3,509,802 and a total of 1,966,043 shares of Series A Preferred Stock outstanding at December 31, 2019. In January 2020, the shares that were previously classified as a liability as of December 31, 2019 were reclassified to temporary equity upon the approved increase to authorized shares of Series A Preferred Stock.

In January 2020, the Company issued 119,454 additional shares of Series A Preferred Stock for gross cash proceeds of $1,021,413. The Company incurred issuance costs of $23,610 in connection with the financing in January 2020.

Series B Preferred Stock

In December 2020, the Company authorized the sale and issuance of up to 6,032,183 shares of Series B Preferred Stock, $0.001 par value per share, at an original issuance price of $10.2782 per share. The Series B Preferred Stock financing was structured to close in two tranches. The first tranche closed in December 2020 and the Company issued 3,619,292 shares of Series B Preferred Stock for gross cash proceeds of $37,199,929. The Company incurred issuance costs of $216,019 in connection with the financing in December 2020.

The Company determined the right of the investors to purchase 2,412,853 shares of Series B Preferred Stock in the second tranche does not meet the definition of a freestanding financial instrument as it is not separable from the Series B Preferred Stock issued in the first tranche. The issuance of the second tranche is subject to the Company meeting certain development milestones or at the election of the holders of at least a majority of the then outstanding shares of Series B Preferred Stock which must include one specific shareholder (the “Requisite Holders”). Each holder of Series B Preferred Stock may elect to purchase their requisite shares of the second tranche at any time. As of December 31, 2020, the Company has not met these development milestones nor did the Requisite Holders elect to purchase the second tranche prior to meeting these milestones and therefore no shares of the second tranche were issued.

In April and May 2021, all 2,412,853 shares of the second tranche of Series B Preferred Stock were issued based on the voluntary election of substantially all of the holders of Series B Preferred Stock. The Company received gross proceeds of $24,799,786.

As of December 31, 2020, the rights and preferences of the Series A Preferred Stock and Series B Preferred Stock (“Preferred Stock”) are as follows:

Conversion

Each share of Preferred Stock may be converted at any time, at the option of the holder, into shares of Class A common stock, subject to the applicable conversion rate as determined by dividing the original issue price by the conversion price. The conversion price for the Series A Preferred Stock and Series B Preferred Stock (as may be adjusted for certain customary dilutive events) is $8.5514 and $10.2782, respectively. The Preferred Stock automatically convert into shares of Class A common stock at the then effective conversion rate upon the closing of a public offering of the Company’s securities with gross proceeds to the Company of at least $75,000,000 and a share price of at least $10.2782 or at the election of the holders of the Requisite Holders.

Holders of Series B Preferred Stock that would beneficially own at least 9.9% of any then outstanding class of equity securities may elect to receive a portion of their converted Series B Preferred Stock as Class B common stock upon conversion.

Dividends

Preferred Stockholders are entitled to receive per annum dividends of 7% of the original issue price share, payable only when, as and if declared by the Board of Directors. The right to receive these dividends is not

Note 6 — Convertible Preferred Stock (Continued)

cumulative, and therefore, if not declared in any year, the right to receive such dividends shall terminate and not carry forward into the next year. As of December 31, 2020 and 2019, no dividends had been declared.

Voting Rights

Preferred Stock and common stock vote together as one class on an as converted basis. Common stock voting rights on certain matters are subject to the powers, preferences, and rights of the Preferred Stock. Preferred Stockholders are entitled to vote on all matters and shall have the number of votes equal to the number of shares of common stock into which the shares of Preferred Stock held by such holder are then convertible. As long as 2,132,029 shares of Preferred Stock are outstanding, certain actions such as mergers, acquisition, liquidation, dissolution, wind up of business, and deemed liquidation events, must be approved by the holders of at least a majority of the then-outstanding shares of Preferred Stock.

Liquidation Preference

Upon liquidation, dissolution, or winding up of business, holders of Preferred Stock are entitled to receive a liquidation preference in priority to holders of common stock at the original respective Preferred Stock issue price for such series. If assets available for distribution are insufficient to satisfy the liquidation payment to holders of Preferred Stock in full, assets available for distribution will be allocated among holders Preferred Stock on a pari passu basis at an amount per share equal to the greater of the respective original Preferred Stock issue price for such series plus any declared but unpaid dividends or such amount had all shares been converted to common stock.

When holders of Preferred Stock are satisfied in full, any excess assets available for distribution will be allocated ratably among common stock holders based on their pro rata shareholdings. Upon a deemed liquidation event, as defined in the articles of incorporation, holders have the option to redeem their shares at the liquidation payment amounts summarized above.

Redemption

Other than described above, the shares of Preferred Stock are not redeemable.

Note 7 — Common Stock

As of December 31, 2020, the Company has 15,733,000 authorized shares of Class A common stock, $0.001 par value per share, of which 3,535,811 are issued and outstanding. The holders of Class A common stock are entitled one vote for each share of common stock. Dividends may be paid when, and if declared by the Board of Directors, subject to the limitations, powers and preferences granted to the Series Preferred stockholders and on a proportionate basis with holders of Class B common stock.

As of December 31, 2020, the following number of shares of Class A common stock have been reserved:

Conversion of Series A Preferred	2,495,933
Conversion of Series B Preferred	3,619,292
Exercise of common stock warrants	220,220
Exercise of common stock options	1,286,618
Total	7,622,063

As of December 31, 2020, the Company has 6,032,183 authorized shares of Class B common stock, $0.001 par value per share, of which no shares have been issued nor are outstanding. The holders of Class B common stock have no voting rights. Dividends may be paid when, and if, declared by the Board of Directors, subject to the limitations, powers and preferences granted to the preferred stockholders and on a proportionate basis with holders of Class A common stock.

Note 7 — Common Stock (Continued)

Common Stock Warrants

During 2019, the Company issued warrants to purchase an aggregate of 220,220 shares of common stock at an exercise price of $4.21 per share to several advisors, including 143,560 shares to entities related to members of the Board of Directors of the Company, in lieu of cash payments. These warrants vested immediately upon issuance, become exercisable on January 9, 2021 and have a 10 year term set to expire on January 9, 2030. The fair value of these warrants, totaling $739,034, was recorded in the consolidated statements of operations as general and administrative expense during the year ended December 31, 2019. The Company evaluated the terms of these warrants and determined that equity classification was appropriate. As of December 31, 2020, no warrants have been exercised.

The fair value of these warrants was estimated using a Black-Scholes model with the following assumptions:

	2019
Risk-free interest rate	1.89%
Expected dividend yield	0%
Volatility	77.03%
Expected term	10.0 years

Note 8 — Net Loss Per Share Attributable to Common Stockholders

Net loss per share of common stock is computed using the two-class method required for multiple classes of common stock and participating securities based upon their respective rights to receive dividends as if all income for the period has been distributed. The rights, including the liquidation and dividend rights and sharing of losses, of the Class A and Class B common stock are identical, other than voting rights. As the liquidation and dividend rights and sharing of losses are identical, the undistributed earnings are allocated on a proportionate basis and the resulting net loss per share attributed to common stockholders is therefore the same for Class A and Class B common stock on an individual or combined basis.

The Company's participating securities include the Company's Preferred Stock, as the holders are entitled to receive noncumulative dividends in the event that a dividend is paid on common stock. The holders of Preferred Stock do not have a contractual obligation to share in losses of the Company, and therefore during periods of loss there is no allocation required under the two-class method.

Basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period, adjusted for outstanding shares that are subject to repurchase.

Diluted net loss per share is computed by giving effect to all potentially dilutive securities outstanding for the period using the treasury stock method or the if-converted method based on the nature of such securities. The Company has reported net losses for all periods presented, therefore diluted net loss per common share attributable to common stockholders is the same as basic net loss per common share attributable to common stockholders, because potentially dilutive common shares are not assumed to have been issued if their effect is anti-dilutive.

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 8 — Net Loss Per Share Attributable to Common Stockholders (Continued)

Basic and diluted net loss per share attributable to common stockholders was calculated at December 31 as follows:

	2020	2019
Numerator:		
Net loss	$(17,039,898)	$(7,709,448)
Denominator – basic and diluted:		
Weighted-average common shares outstanding, basic and diluted	3,535,811	3,535,811
Net loss per share – basic and diluted	$ (4.82)	$ (2.18)

The following table sets forth the potentially dilutive securities that have been excluded from the calculation of diluted net loss per share because to include them would be anti-dilutive (in common stock equivalent shares) at December 31:

	2020	2019
Series A Preferred	2,495,933	1,966,043
Series B Preferred	3,619,292	—
Warrants to purchase common stock	220,220	220,220
Options to purchase common stock	1,286,618	1,124,996
Total shares of common stock equivalents	7,622,063	3,311,259

Unaudited pro forma net loss per share attributable to common stockholders is computed using the weighted-average number of common shares outstanding after giving effect to the conversion of all the convertible preferred stock into shares of common stock as if such conversion had occurred at the beginning of the period presented or the date of original issuance, if later.

The following table summarizes the Company's unaudited pro forma net loss per share attributable to common stockholders for the year ending December 31, 2020:

	2020
Numerator:	
Net loss	$(17,039,898)
Denominator:	
Weighted-average common shares outstanding, basic and diluted	3,535,811
Assumed conversion Series A Preferred and Series B Preferred	2,592,047
Denominator for pro forma basic and diluted loss	6,127,858
Net loss per share – basic and diluted	$ (2.78)

Note 9 — Stock-Based Compensation

During 2015, the Company established the 2015 Stock Incentive Plan ("Incentive Plan"), under which incentive stock options, nonqualified stock options and common stock may be awarded to employees, directors or consultants of the Company. The options typically vest over a four-year period. At December 31, 2020, the maximum number of shares available for issuance under the Incentive Plan was 2,017,981 shares. At December 31, 2020, the number of shares available for future grants under the Incentive Plan was 730,363 shares. During the years ended December 31, 2020 and 2019, the Company recognized stock-based

IMMUNEERING CORPORATION AND SUBSIDIARY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 9 — Stock-Based Compensation (Continued)

compensation expense of $1,086,769 and $596,631, respectively. At December 31, 2020, compensation expense remaining to be recognized for outstanding stock options was $1,655,822 and to be recognized over a weighted-average period of 2.0 years.

The Company used the following assumptions in its application of the Black-Scholes option pricing model for grants in 2020 and 2019:

	2020	2019
Risk-free interest rate	0.36% - 1.45%	1.77% - 2.20%
Expected dividend yield	0%	0%
Volatility	67.30% - 80.85%	66.99% - 70.44%
Expected term	5.92 - 10 years	6.08 years

The following table summarizes the stock option activity under the Plan:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding, December 31, 2018	521,500	$4.72	8.77	$ —
Granted	714,496	$4.22		
Cancelled	(111,000)	$4.72		
Outstanding, December 31, 2019	1,124,996	$4.21	9.13	$ —
Granted	245,122	$4.26		
Cancelled	(83,500)	$4.21		
Outstanding, December 31, 2020	1,286,618	$4.22	8.37	$1,994,744
Vested and exercisable at December 31, 2020	617,741	$4.21	7.74	$ 963,675
Vested and expected to vest at December 31, 2020	1,286,618	$4.22	8.37	$1,994,744

During December 2019, the Company modified the exercise price of options to purchase 418,000 shares of common stock to $4.21 and the related incremental expense of $34,525 was recognized during the year ended December 31, 2019 and was included as a component of share-based compensation expense.

For the years ended December 31, 2020 and 2019, the Company recognized share-based compensation expense recognized on the accompanying consolidated statements of operations as follows:

	2020	2019
Cost of revenue	$ 108,027	$166,674
Research and development	503,111	305,729
General and administrative	475,631	124,228
Total	$1,086,769	$596,631

IMMUNEERING CORPORATION AND SUBSIDIARY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 10 — Income Taxes

A reconciliation of the effect of applying the federal statutory rate to the net loss and the effective income tax rate are as follows:

	2020	2019
Statutory federal income tax rate	21.0%	21.0%
State tax, net of federal benefit	6.3%	6.3%
Permanent differences	(1.5)%	(1.9)%
Federal research and development credits	4.5%	3.0%
State research and development credits	0.7%	0.4%
Other differences	(3.7)%	(5.4)%
Change in valuation allowance	(27.3)%	(23.4)%
Effective income tax rate	0.0%	0.0%

As of December 31, 2020 and 2019, the components and tax effects of each type of item that gave rise to the net deferred tax assets were as follows:

	2020	2019
Deferred tax assets:		
Stock-based compensation expense	$ 73,984	$ 27,521
R&D credit carryforward	1,574,596	675,646
NOL carryforward	5,525,123	1,797,847
Gross deferred tax assets	7,173,703	2,501,014
Valuation allowance	(7,127,448)	(2,479,213)
Net deferred tax assets	46,255	21,801
Net deferred tax liabilities:		
Prepaid expenses deducted for tax	(28,671)	(12,163)
Tax depreciation in excess of book	(17,584)	(9,638)
Total deferred tax liabilities	(46,255)	(21,801)
Net deferred taxes	$ —	$ —

Federal net operating losses (“NOL”) generated in tax years ended after December 31, 2017 are limited to 80% of taxable income, only carried forward and carried forward indefinitely under the Internal Revenue Code (“IRC”). The Company has no income tax expense due to operating losses incurred for the years ended December 31, 2020 and 2019. The Company has provided a valuation allowance for the full amount of the net deferred tax assets as, based on all available evidence, it is considered more likely than not that all the recorded deferred tax assets will not be realized in a future period. At December 31, 2020, the Company has federal and state NOLs of $22,012,360 and $14,280,490, respectively all generated after the tax year ended December 31, 2017. At December 31, 2020, the Company has federal and state research and development credit carryforwards, $1,347,372 and $227,225, respectively, that start to expire beginning in 2025.

As the Company has not yet achieved profitable operations, management believes the tax benefits as of December 31, 2020 did not satisfy the realization criteria set forth in ASC Topic 740, Income Taxes and, therefore, has recorded a full valuation allowance for the entire deferred tax asset. The valuation allowance increased in 2020 by $4,648,234 due to the increase in the deferred tax assets by the same amount, primarily due to NOL and research and development credit carryforwards.

Note 10 — Income Taxes (Continued)

The Company has generated significant net operating loss carryforwards and research and development tax credits, as a result of incurred losses due to research activities since inception. The Company is generally able to carry NOLs and R&D credits forward to reduce our tax liability in future years. However, our ability to utilize the NOLs and R&D credits is subject to the rules of Sections 382 and 383 of the Internal Revenue Code of 1986. Those sections generally restrict the use of NOLs and R&D credits after an "ownership change." We may have experienced an "ownership change" within the meaning of Section 382 in the past and there can be no assurance that we will not experience additional ownership changes in the future. As a result, our NOLs and business credits (including the R&D credit) may be subject to limitations and we may be required to pay taxes earlier and in larger amounts than would be the case if our NOLs or R&D credits were freely usable.

The Company files tax returns in the United States including California, New York and Massachusetts. All tax years from 2016 to 2020 remain open to examination by the major taxing jurisdictions to which the Company is subject, as carryforward attributes generated in years past may still be adjusted upon examination by the Internal Revenue Service ("IRS") or other authorities if they have or will be used in a future period. The Company is not currently under examination by the IRS or any other jurisdictions for any tax years.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") was enacted in response to the COVID-19 pandemic. The CARES Act, among other things, permits NOL carryovers and carrybacks to offset 100% of taxable income for taxable years beginning before 2021. In addition, the CARES Act allows NOLs incurred in 2018, 2019, and 2020 to be carried back to each of the five preceding taxable years to generate a refund of previously paid income taxes. The enactment of the CARES Act resulted in increased federal and state research and development carryforwards from 2013 through 2018 of $142,764 and $55,901, respectively, and decreased federal NOL of $759,794 from 2018.

As of December 31, 2020, the Company had no uncertain tax positions. The Company has elected to recognize interest and penalties related to income tax matters as a component of income tax expense, of which no interest or penalties were recorded for the years ended December 31, 2020 and 2019.

Note 11 — Commitments and Contingencies

Operating Leases

The Company leases office space in Cambridge, Massachusetts and New York, New York pursuant to short-term arrangements. The Cambridge lease is on a month-to-month basis, requiring one month's notice before termination. The New York lease is renewable on a quarterly basis and the last renewal was on March 8, 2021 which extended the lease term until June 30, 2021. These lease agreements include payments for lease and non-lease components and the Company has elected to not separate such components and these payments were recognized as rent expense.

As of December 31, 2020, total future minimum lease payments for its short-term leases in Cambridge, Massachusetts and New York, New York, was $12,000 all due in 2021. The Company leases storage space for its electronic data equipment in Somerville, Massachusetts. This lease is renewable on an annual basis effective every March 1st. Prior to December 31, 2020, the Company renewed the lease through March 31, 2022. As of December 31, 2020, total future minimum lease payments for this lease were $21,416 due in 2021 and $3,569 due in 2022.

In July 2019, the Company entered into an office lease in San Diego, California ("2019 San Diego Lease") with a lease term of 24 months with no escalations and variable costs based on additional number of employees using the facility. This lease was cancelable upon a 30-day notice period. Upon adoption of ASC 842 on January 1, 2020, a right-to-use asset and lease liability based on the fixed costs was recognized by the Company for $61,822. Effective September 20, 2020, the lease was terminated and the remaining right-of-use asset and lease liability were derecognized. No gain or loss was recognized for the termination of this lease.

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 11 — Commitments and Contingencies (Continued)

In October 2020, the Company entered into an office lease in San Diego, California ("2020 San Diego Lease") with a lease term of 67 months. At the lease commencement date, a right-to-use asset and lease liability was recognized by the Company for $637,863.

Maturities of the lease liabilities due under the Company's 2020 San Diego Lease as of December 31, 2020 are as follows:

	Amount
2021	$ 111,527
2022	115,430
2023	125,741
2024	161,498
2025	167,150
2026	57,332
Total future lease payments	738,678
Less: Imputed interest	(117,589)
Total lease liabilities	$ 621,089
Current portion lease liability	$ 76,322
Lease liability, noncurrent	544,767
Total lease liability	$ 621,089

Quantitative information regarding the Company's leases for the year ended December 31, 2020 is as follows:

	2020
Lease costs:	
Operating lease cost	$ 66,652
Short-term lease cost	252,796
Variable lease cost	14,700
Total lease costs	$334,148
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 58,666
Operating cash flows from short-term leases	252,796
	$311,462

Weighted average remaining lease term – operating leases	5.33 years
Weighted average discount rate – operating leases	6.0%

As the Company's leases typically do not provide an implicit rate, the Company uses an estimate of its incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments.

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 11 — Commitments and Contingencies (Continued)

Litigation

The Company may be exposed to litigation in connection with its products and operations. The Company's policy is to assess the likelihood of any adverse judgments or outcomes related to legal matters, as well as ranges of probable losses. The Company is not aware of any material legal matters.

Clinical Research Contracts

The Company may enter into contracts in the normal course of business with clinical research organizations for clinical trials, with contract manufacturing organizations for clinical supplies, and with other vendors for preclinical studies, supplies and other services for our operating purposes. These contracts generally provide for termination with a 30-day notice.

COVID-19

In March 2020, the World Health Organization declared the outbreak of a novel coronavirus disease ("COVID 19") a pandemic, which continues to spread throughout the United States and worldwide. As of the date of the consolidated financial statements were issued, the Company's operations have not been significantly impacted by the COVID-19 outbreak. However, the Company cannot at this time predict the specific extent, duration, or full impact that the COVID-19 outbreak will have on its financial condition and operations, including planned clinical trials. The Company believes that there may be an impact on the clinical development of its product candidates, including potential delays, halts or modifications to its planned trials.

Note 12 — Related Party Transactions

An officer of the Company is a board member of a contract research organization ("CRO") that provides contract services to the Company. Research and development expenses in the accompanying consolidated statement of operations include the cost of services provided by the CRO to the Company which amounted to $2,744,051 and $400,504 for the years ended December 31, 2020 and 2019, respectively. Of this amount, $279,153 and $95,878 was owed to the CRO at December 31, 2020 and 2019, respectively, and is included in accounts payable or accrued contract research expenses in the accompanying consolidated balance sheets.

Note 13 — Subsequent Events

Management has evaluated subsequent events through May 13, 2021, the date the consolidated financial statements were issued, and determined that no additional subsequent events had occurred that would require recognition in these consolidated financial statements except as disclosed in Note 6.

IMMUNEERING CORPORATION AND SUBSIDIARY

CONSOLIDATED BALANCE SHEETS
March 31, 2021 and December 31, 2020
(Unaudited)

	December 31, 2020	March 31, 2021	Pro Forma March 31, 2021
ASSETS			
Current assets:			
Cash and cash equivalents	$ 37,090,151	$ 30,933,747	$ 30,933,747
Accounts receivable	500,110	492,405	492,405
Prepaids and other current assets	140,958	756,603	756,603
Total current assets	37,731,219	32,182,755	32,182,755
Property and equipment, net	64,363	72,060	72,060
Right-of-use asset, net	613,103	588,076	588,076
Other assets	14,333	14,333	14,333
Total assets	**$ 38,423,018**	**$ 32,857,224**	**$ 32,857,224**
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)			
Current liabilities:			
Accounts payable	$ 1,480,537	$ 1,368,795	$ 1,368,795
Accrued expenses	698,992	1,310,863	1,310,863
Lease liability, current	76,322	78,447	78,447
Total current liabilities	2,255,851	2,758,105	2,758,105
Long-term liabilities:			
Lease liability, noncurrent	544,767	524,145	524,145
Total liabilities	2,800,618	3,282,250	3,282,250
Commitments and contingencies (Note 9)			
Convertible preferred stock:			
Series B preferred stock, $0.001 par value, 6,032,183 shares authorized, 3,619,292 shares issued and outstanding at December 31, 2020 and March 31, 2021, 0 shares issued and outstanding at March 31, 2021 pro forma, respectively net of issuance costs	36,983,910	36,983,910	—
Series A preferred stock, $0.001 par value, 2,495,933 shares authorized, 2,495,933 shares issued and outstanding at December 31, 2020 and March 31, 2021, 0 shares issued and outstanding at March 31, 2021 pro forma, respectively net of issuance costs	21,119,940	21,119,940	—
Total convertible preferred stock	58,103,850	58,103,850	—
Stockholders' equity (deficit):			
Class A common stock, $0.001 par value, 15,733,000 shares authorized, 3,535,811 shares issued and outstanding at December 31, 2020 and March 31, 2021, 9,651,036 shares issued and outstanding at March 31, 2021 pro forma, respectively	3,536	3,536	9,651
Class B common stock, $0.001 par value, 6,032,183 shares authorized, 0 shares issued and outstanding at March 31, 2021 and December 31, 2020 and March 31, 2021 pro forma	—	—	—
Additional paid-in capital	3,252,654	3,434,879	61,532,614
Accumulated deficit	(25,737,640)	(31,967,291)	(31,967,291)
Total stockholders' equity (deficit)	(22,481,450)	(28,528,876)	29,574,974
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	**$ 38,423,018**	**$ 32,857,224**	**$ 32,857,224**

The accompanying notes are an integral part of these consolidated financial statements.

IMMUNEERING CORPORATION AND SUBSIDIARY

CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE THREE MONTHS ENDED MARCH 31, 2021 and 2020
(Unaudited)

	2021	2020
Revenue	$ 748,200	$ 483,050
Cost of revenue	409,163	255,026
Gross profit	339,037	228,024
Operating expenses		
Research and development	5,391,020	2,823,254
General and administrative	1,184,023	643,984
Total operating expenses	6,575,043	3,467,238
Loss from operations	(6,236,006)	(3,239,214)
Other income		
Interest income	6,355	38,494
Net loss	**$(6,229,651)**	**$(3,200,720)**
Net loss per share attributable to common stockholders, basic and diluted	$ (1.76)	$ (0.91)
Weighted-average common shares outstanding, basic and diluted	3,535,811	3,535,811
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)	$ (0.65)	
Pro forma weighted-average common shares outstanding, basic and diluted (unaudited)	9,651,036	

The accompanying notes are an integral part of these consolidated financial statements.

IMMUNEERING CORPORATION AND SUBSIDIARY

CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
FOR THE THREE MONTHS ENDED MARCH 31, 2021 and 2020
(Unaudited)

	Convertible Preferred Stock					Stockholders' Deficit						
	Series B		Series A		Total Convertible Preferred Stock	Class A Common Stock		Class B Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount		Shares	Par Value	Shares	Par Value			
Balance at December 31, 2019	—	—	1,966,043	$16,611,832	$16,611,832	3,535,811	$3,536	—	—	$2,165,885	$ (8,697,742)	$ (6,528,321)
Issuance of Series A convertible preferred stock, net of issuance costs	—	—	529,890	4,508,108	4,508,108	—	—	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	272,143	—	272,143
Net loss	—	—	—	—	—	—	—	—	—	—	(3,200,720)	(3,200,720)
Balance at March 31, 2020	—	$ —	2,495,933	$21,119,940	$21,119,940	3,535,811	$3,536	—	$ —	$2,438,028	$(11,898,462)	$ (9,456,898)
Balance at December 31, 2020	3,619,292	$36,983,910	2,495,933	$21,119,940	$58,103,850	3,535,811	$3,536	—	—	$3,252,654	$(25,737,640)	$(22,481,450)
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	182,225	—	182,225
Net loss	—	—	—	—	—	—	—	—	—	—	(6,229,651)	(6,229,651)
Balance at March 31, 2021	3,619,292	$36,983,910	2,495,933	$21,119,940	$58,103,850	3,535,811	$3,536	—	$ —	$3,434,879	$(31,967,291)	$(28,528,876)

The accompanying notes are an integral part of these consolidated financial statements.

IMMUNEERING CORPORATION AND SUBSIDIARY

CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE THREE MONTHS ENDED MARCH 31, 2021 and 2020
(Unaudited)

	2021	2020
Cash flows from operating activities:		
Net loss	$ (6,229,651)	$ (3,200,720)
Adjustment to reconcile to net loss to net cash used in operating activities:		
Depreciation	8,867	5,307
Right-of-use asset amortization	25,027	9,922
Stock based compensation expense	182,225	272,143
Change in assets and liabilities:		
(Increase) decrease in:		
Accounts receivable	7,705	(138,970)
Prepaid expenses and other current assets	(615,645)	(300,283)
Increase (decrease) in:		
Accounts payable	(111,742)	869,447
Accrued expenses	611,871	178,699
Lease liability	(18,497)	(9,922)
Net cash used in operating activities	(6,139,840)	(2,314,377)
Cash flows from investing activities:		
Purchase of property and equipment	(16,564)	(4,350)
Net cash used in investing activities	(16,564)	(4,350)
Cash flows from financing activities:		
Proceeds from the issuance of Series A preferred stock, net of issuance costs	—	998,306
Net cash provided by financing activities	—	998,306
Net decrease in cash and cash equivalents	(6,156,404)	(1,320,421)
Cash and cash equivalents at beginning of period	37,090,151	13,782,175
Cash and cash equivalents at end of period	$30,933,747	$12,461,754
Supplemental disclosures of noncash information:		
Reclassification of liability for Series A preferred stock	$ —	$ 3,509,802

The accompanying notes are an integral part of these consolidated financial statements.

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO UNAUDITED INTERIM CONSOLIDATED FINANCIAL STATEMENTS

Note 1 — Organization and Nature of Business

Immuneering Corporation, a Delaware corporation, ("Immuneering" or the "Company") was incorporated in 2008. The Company leverages bioinformatics to develop new medicines unlikely to be found by traditional drug discovery methods. The Company's current pipeline of drug candidates is focused on treating aspects of disease that have eluded conventional approaches. Utilizing its proprietary Disease Cancelling Technology, the Company's objective is to discover and develop medicines that reverse a disease signal across many relevant genes. Concurrent with its internal programs, the Company provides computational biology services to pharmaceutical and biotechnology companies. On October 30, 2019, Immuneering formed a wholly owned subsidiary, Immuneering Securities Corporation ("ISC"), a Massachusetts securities corporation, for the sole purpose of buying, selling and holding securities on the Company's behalf. Immuneering and ISC are collectively referred to as "the Company" throughout these consolidated financial statements.

Since inception, the Company has devoted substantially all of its efforts to business planning, service revenue generation, research and development, recruiting management and technical staff, and raising capital. The Company has financed its operations through service revenues, the issuance of convertible debt and the sale of convertible preferred stock and common stock.

The Company is subject to a number of inherent risks associated with any biotechnology company that has substantial expenditures for research and development. These risks include, but are not limited to, the need to obtain adequate additional funding, possible failure of clinical trials or other events demonstrating lack of clinical safety or efficacy of its product candidates, dependence on key personnel, reliance on third-party service providers for manufacturing drug product and conducting clinical trials, the ability to successfully secure its proprietary technology, and risks related to the regulatory approval and commercialization of a product candidate. There can be no assurance that the Company's research and development program will be successful. In addition, the Company operates in an environment of rapid technological change and is largely dependent on the services of its employees, advisors, and consultants.

To date, the Company has funded its operations through service revenues, and with proceeds from the sale of its capital stock and convertible notes. The Company has incurred recurring losses over the past several years and as of March 31, 2021, the Company had an accumulated deficit of $31,967,291. The Company expects to continue to generate operating losses for the foreseeable future. The future viability of the Company is dependent on its ability to raise additional capital to finance its operations. The Company's inability to raise capital as and when needed could have a negative impact on its financial condition and ability to pursue its business strategies. There can be no assurances that additional funding will be available on terms acceptable to the Company, or at all. If the Company is unable to raise additional funds when needed, it may be required to delay, reduce the scope of, or eliminate development programs, which may adversely affect its business and operations. Management considers that there are no conditions or events, in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern and estimates that its cash and cash equivalents of $30,933,747 as of March 31, 2021, along with the gross proceeds of $24,799,786 from the issuance of shares in the second tranche of Series B Preferred in April and May 2021 (Note 5) will enable it to meet our current operating plans for at least the next twelve months after the date that the financial statements were issued.

The full extent to which coronavirus ("COVID-19") pandemic will directly or indirectly impact the Company's business, results of operations and financial condition, including expenses and research and development costs, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19 and the actions taken to contain or treat COVID-19, as well as the economic impact on local, regional, national and international markets. The Company has considered potential impacts arising from COVID-19 pandemic and is not presently aware of any events or circumstances that would require the Company to update its estimates, judgements or revise the carrying values of its assets or liabilities.

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO UNAUDITED INTERIM CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 2 — Summary of Significant Accounting Policies

Basis of Presentation: The consolidated financial statements have been prepared in accordance with accounting standards set by the Financial Accounting Standards Board ("FASB"). The FASB sets generally accepted accounting principles ("GAAP") to ensure the consolidated financial statements are consistently reported. References to GAAP issued by the FASB in these footnotes are to the FASB Accounting Standards Codifications ("ASC"). The consolidated financial statements include the accounts of the Company and its wholly owned subsidiary. All intercompany balances and transactions have been eliminated in consolidation.

Unaudited Interim Financial Information: The unaudited interim consolidated financial statements of the Company have been prepared, without audit, in accordance with GAAP and in accordance with the rules and regulations of the Securities and Exchange Commission ("SEC") regarding interim financial reporting. Certain information and footnote disclosures normally included in the annual financial statements prepared in accordance with GAAP have been omitted from the unaudited interim consolidated financial statements, as is permitted by such rules and regulations. While we believe that the disclosures presented are adequate in order to make the information not misleading, these unaudited interim consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and notes for the year ended December 31, 2020.

It is management's opinion that these financial statements include all normal and recurring adjustments necessary for a fair presentation of the Company's financial position, operating results and cash flows. Revenues and net loss for any interim period are not necessarily indicative of future or annual results.

Unaudited Pro Forma Balance Sheet: The accompanying unaudited pro forma consolidated balance sheet information as of March 31, 2021 has been prepared to give effect to the automatic conversion of all outstanding shares of Preferred Stock as of March 31, 2021 as if the Company's proposed initial public offering had occurred on March 31, 2021.

Use of Estimates: The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses during the reporting periods. These estimates and assumptions are based on current facts, historical experience and various other factors believe to be reasonable under the circumstances, the results of which form the basis for making judgements about the carrying values of assets liabilities and the recording of expenses that are not readily apparent from other sources. Significant estimates reflected in these consolidated financial statements included but are not limited to, the research and development expenses, determination of fair value of stock-based awards, the valuation of common stock, and the right-to-use assets and operating lease liability. Actual results may differ materially and adversely from these estimates.

Segments: Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker ("CODM") in making decisions regarding resource allocation and assessing performance. The Company's chief executive officer is the CODM, and he uses consolidated financial information in determining how to allocate resources and assess performance. The Company has determined that it operates in one segment.

Cash and Cash Equivalents: Cash and cash equivalents are comprised of deposits at major financial banking institutions and highly liquid investments with an original maturity of three months or less at the date of purchase. Cash is maintained at Federal Deposit Insurance Company ("FDIC") insured financial institutions. At times, the Company has maintained cash in excess of FDIC limits, however it has not experienced any losses with respect to its cash balances. The Company regularly monitors the financial condition of the institutions in which it has depository accounts and management believes that the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which those deposits are held.

Accounts Receivable: Accounts receivable are stated at the amount management expects to collect from outstanding balances. An allowance for doubtful accounts is estimated for those accounts receivable

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO UNAUDITED INTERIM CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 2 — Summary of Significant Accounting Policies (Continued)

considered to be uncollectible based upon historical experience and management's evaluation of outstanding accounts receivable. Bad debts are written off against the allowance when identified. At March 31, 2021 and December 31, 2020 there was no allowance for doubtful accounts.

Concentration of Credit Risk: Financial instruments that potentially subject the Company to significant concentration of credit risk consist primarily of accounts receivable and revenue. To manage accounts receivable credit risk, the Company continuously evaluates the creditworthiness of its customers and the need for an allowance for potential credit losses. The Company has not experienced any losses in such accounts.

Property and Equipment: Property and equipment are recorded at cost, net of accumulated depreciation. Expenditures for major replacements and improvements are capitalized, while expenditures for general repairs and maintenance are expensed as incurred. Upon retirements or disposition of property and equipment, the related cost and accumulated depreciation are removed from the consolidated balance sheet and any resulting gain or loss is recorded in the consolidated statement of operations. Depreciation is calculated using the straight-line method once assets are placed in service.

Asset Class	Estimated Useful Lives
Computer equipment	3 years
Furniture and fixtures	5 years

Impairment of Long-lived Assets: Periodically, the Company evaluates its long-lived assets, which consist primarily of property and equipment, for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the future undiscounted net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the asset exceeds the fair value of the asset. To date, no impairments have occurred.

Leases: In February 2016, the FASB issued Accounting Standards Update ("ASU") No. 2016-02, Leases (Topic 842) ("ASC 842"), a standard issued to increase transparency and comparability among organizations related to their leasing activities. This standard established a right-of-use model that requires the recognition of right-of-use assets and lease liabilities for most leases as well as provides disclosure with respect to certain qualitative and quantitative information related to a company's leasing arrangements to meet the objective of allowing users of financial statements to assess the amount, timing and uncertainty of cash flows arising from leases.

The Company adopted the leasing standard using the modified retrospective transition approach as of January 1, 2020, with no restatement of prior periods or cumulative adjustment to retained earnings. Upon adoption, the Company elected the package of transition practical expedients, which allowed the Company to carry forward prior conclusions related to whether any expired or existing contracts are or contain leases, the lease classification for any expired or existing leases, and initial direct costs for existing leases. The Company also made an accounting policy election to not recognize leases with an initial term of 12 months or less within its consolidated balance sheets, and to recognize those lease payments on a straight-line basis in its consolidated statements of operations over the lease term. The adoption of the leasing standard did not have an impact on the consolidated statement of operations.

The Company determines if an arrangement is a lease at contract inception. Right-of-use assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease. Right-of-use assets and lease liabilities are recognized at the commencement date of the lease based upon the present value of future lease payments over the expected lease term. When determining the lease term, the Company includes options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. As most of the Company's leases do

Note 2 — Summary of Significant Accounting Policies (Continued)

not provide an implicit interest rate, the Company uses its incremental borrowing rate, which is based on rates that would be incurred to borrow on a collateralized basis over a term equal to the lease payments in a similar economic environment, in determining the present value of lease payments.

The Company has elected not to separate lease and non-lease components as a single lease component. The Company's lease is reflected in right-of-use asset and lease liabilities (current and non-current) in the consolidated balance sheets. Fixed rents are included in the calculation of the lease balances while variable costs paid for certain operating and pass-through costs are excluded. Lease expense is recognized on a straight-line basis over the lease term.

Convertible preferred stock: The Company has classified convertible preferred stock ("Preferred Stock") as temporary equity in the accompanying consolidated balance sheets due to certain changes in control events that are outside of the Company's control, including transfer of control of the Company, where holders of the Preferred Stock could cause redemption of the shares in these situations. The Company does not accrete the carrying values of the Preferred Stock to the redemption values since a liquidation event was not considered probable as of March 31, 2021 and December 31, 2020. Subsequent adjustments of the carrying values to the redemption values will be made only if it becomes probable that such a liquidation event will occur.

Revenue Recognition: In accordance with ASC 606, revenue is recognized when a customer obtains control of promised goods and services. The core principle of the standard is to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. To achieve that core principle, the Company applies the following five-step model:

- Identify the contract with a customer
- Identify the performance obligations in the contract
- Determine the transaction price
- Allocate the transaction price to the performance obligations in the contract
- Recognize revenue when or as performance obligations are satisfied

The Company's contracts generally consist of the promise to provide computational biology professional services to pharmaceutical and biotechnology companies, which the Company has concluded constitutes one performance obligation that is delivered over time. The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring the services to the customer. The Company's contracts provide for either agreed upon rates per hour based on the level of the professional working on the project or a fixed fee for a defined scope of work. The Company recognizes revenue over time by measuring the progress toward complete satisfaction of the performance obligation using a single method of measuring progress, which depicts the performance in transferring control of the associated services to the customer. The Company uses input methods to measure the progress toward the complete satisfaction of performance obligations and evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenue and net loss in the period of adjustment.

The Company's contract terms do not allow for a right of return or refund and do not contain significant financing components. Receivables associated with the contract will generally be collected within thirty to sixty days, in accordance with the underlying payment terms.

Income Taxes: The Company provides for income taxes in accordance with ASC Topic 740, Income Taxes. Deferred tax assets and liabilities are determined based on the difference between the financial reporting and tax bases of assets and liabilities using enacted tax rates and laws in effect in the years in which the differences are expected to reverse. A valuation allowance is provided if, based upon the weighted available evidence, it is

Note 2 — Summary of Significant Accounting Policies (Continued)

more likely than not that some or all of the deferred tax assets will not be realized. As of December 31, 2020 and March 31, 2021, the Company has recorded a full valuation allowance for the entire net deferred tax assets and liabilities.

The Company provides reserves for potential payments of tax to various tax authorities related to uncertain tax positions when management determines that it is probable that a loss will be incurred related to these matters and the amount of the loss is reasonably determinable. The Company has not identified any significant uncertain tax positions as of March 31, 2021 or December 31, 2020.

Research and Development: All research and development costs are expensed in the period incurred. Research and development costs consist primarily of direct and indirect costs incurred in the connection with the development of our research platform, product candidates, discovery efforts and preclinical studies related to our program pipeline. Direct costs include expenses incurred under agreements with contract research organizations ("CROs"), contract manufacturers to produce preclinical material, other vendors, and consulting fees. Indirect costs include personnel-related expenses, consisting of employee salaries, bonuses, benefits, and equity-based compensation expenses incurred in performing research and development activities, facility and equipment related expenses, consisting of indirect and allocated expenses for rent, depreciation, maintenance of facilities, insurance and other supplies may be incurred. The Company also incurs costs to develop software programs for internal use in identifying potential human drug targets which may then lead to the development of human drug candidates. To date the software programs have primarily been used for internal research and development activities and the costs incurred have been expensed as research and development.

Stock-based Compensation: The Company issues stock-based awards to employees and nonemployees in the form of stock options. The Company accounts for stock-based awards in accordance with ASC 718, Compensation — Stock Compensation ("ASC 718"), which requires all stock-based payments to employees and nonemployees, including grants of employee stock options and modifications to existing stock options, to be recognized in the consolidated statement of operations based on their fair values.

The fair value of options is estimated on the grant date using the Black-Scholes option-pricing model ("Black-Scholes"). Black-Scholes requires the Company to make assumptions and judgments about the variables used in the calculation including the expected term of its stock option, the volatility of the Company's common stock, and an assumed risk-free interest rate. The Company uses the simplified calculation of expected life and volatility is based on an average of the historical volatility of a group of publicly traded companies in a similar industry that the Company believes would be considered a peer group had it been a publicly held company. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the option. Forfeitures are recognized as they occur. No dividend yield was assumed as the Company does not pay, and does not expect to pay, dividends on its common stock. The assumptions underlying these valuations represent management's best estimates, which involve inherent uncertainties and the application of management's judgement.

In accordance with ASU No. 2018-07, Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting, compensation expense for stock-based awards granted to nonemployees is recognized over the period during which services are rendered by such nonemployees. The new standard largely aligns the accounting for share-based payment awards issued to employees and nonemployees by expanding the scope of ASC 718 to apply to nonemployee share-based transactions, as long as the transaction is not effectively a form of financing. There was no adjustment to the financial statements upon adoption of this standard as of January 1, 2020.

As there has been no public market for the Company's common stock to date, the estimated fair value of its common stock has been determined by its board of directors as of the date of each option grant, with input from management, considering the Company's most recently available third-party valuations of common stock and its board of directors' assessment of additional objective and subjective factors that it believed were

Note 2 — Summary of Significant Accounting Policies (Continued)

relevant and which may have changed from the date of the most recent valuation through the date of the grant. These third-party valuations were performed 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. Each valuation methodology includes estimates and assumptions that require the Company's judgment. These estimates and assumptions include a number of objective and subjective factors, including external market conditions, the prices at which the Company sold shares of preferred stock, the superior rights and preferences of securities senior to the Company's common stock at the time of, and the likelihood of, achieving a liquidity event, such as an initial public offering or sale.

The assumptions underlying these valuations represent management's best estimates, which involve inherent uncertainties and the application of management's judgment. As a result, if the Company had used different assumptions or estimates, the fair value of its common stock and its stock-based compensation expense could be materially different.

Fair Value of Financial Instruments: The Company follows the guidance prescribed by ASC Topic 820, Fair Value Measurements ("ASC 820"), which establishes a framework for measuring fair value, and expands disclosures about fair value measurements. The standard provides a consistent definition of fair value which focuses on an exit price which is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The standard establishes a three-level hierarchy for fair value measurements based on the nature of inputs used in the valuation of an asset or liability as of the measurement date.

Level 1: Pricing inputs are quoted prices available in active markets for identical investments as of the reporting date.

Level 2: Pricing inputs are quoted prices for similar investments, or inputs that are observable, either directly or indirectly, for substantially the full term through corroboration with observable market data. The Company does not have any instruments meeting the criteria of Level 2 inputs.

Level 3: Pricing inputs include unobservable inputs that reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing the asset or liability, which are developed based on the best information available. The Company does not have any instruments meeting the criteria of Level 3 inputs.

To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized as Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The carrying amounts reflected in the consolidated balance sheets for cash, accounts payable and accrued expenses approximate their respective fair values because of the short-term maturity of those financial instruments. As of March 31, 2021, and December 31, 2020, the Company only holds Level 1 cash equivalents, which consist of money market funds of $30,684,808 and $36,842,373, respectively.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. The Company is an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended (Jobs Act). 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. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies.

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO UNAUDITED INTERIM CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 2 — Summary of Significant Accounting Policies (Continued)

The Company elected to avail itself of this extended transition period and, as a result, we will not be required to adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

In June 2016, the FASB issued ASU 2016-13, Financial Instruments — Credit Losses (Topic 326): Measurement of Credit Losses on Financial Statements. The new standard, as amended, requires that expected credit losses relating to financial assets measured on an amortized cost basis and available-for-sale debt securities be recorded through an allowance for credit losses. It also limits the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and also requires the reversal of previously recognized credit losses if fair value increases. The targeted transition relief standard allows filers an option to irrevocably elect the fair value option of ASC 825-10, Financial

Instruments-Overall, applied on an instrument-by-instrument basis for eligible instruments. ASU No. 2016-13, Financial Instruments — Credit Losses (Topic 326) will become effective for the Company on January 1, 2023. The Company is currently evaluating the impact of adopting this new accounting guidance.

In December 2019, the FASB issued ASU No. 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes, which simplifies the accounting for income taxes by removing certain exceptions to the general principles in the existing guidance for income taxes and making other minor improvements. The amendments are effective for annual reporting periods beginning after December 15, 2020 with early adoption permitted. The Company is currently evaluating the impact of adopting this new accounting guidance.

Note 3 — Property and Equipment

Property and equipment consisted of the following at March 31, 2021 and December 31, 2020:

	March 31, 2021	December 31, 2020
Computer equipment	$ 190,881	$ 174,317
Furniture and fixtures	18,798	18,798
Total	209,679	193,115
Accumulated depreciation	(137,619)	(128,752)
Property and equipment, net	$ 72,060	$ 64,363

Depreciation expense totaled $8,867 and $5,307 for the three months ended March 31, 2021 and 2020, respectively.

Note 4 — Accrued Expenses

Accrued expenses consisted of the following at March 31, 2021 and December 31, 2020:

	March 31, 2021	December 31, 2020
Accrued professional services	$ 256,337	$269,302
Accrued employee expenses	819,296	163,668
Accrued contract research expenses	235,230	266,022
Total	$1,310,863	$698,992

Note 5 — Convertible Preferred Stock

Series A Preferred Stock

In September 2019, the Company authorized the sale and issuance of up to 1,987,979 shares of Series A Preferred Stock, $0.001 par value per share, at an original issuance price of $8.5514 per share. In January 2020,

Note 5 — Convertible Preferred Stock (Continued)

the number of shares authorized for the Series A Preferred Stock was increased to 2,495,933 shares. The Series A Preferred Stock financing was structured to be issued in rolling closes during 2019 and 2020.

On September 20, 2019, the Company issued an additional 1,122,458 shares of Series A Preferred Stock for gross cash proceeds of $9,598,847 and issued 785,706 shares of Series A Preferred Stock in conjunction with the conversion of the outstanding amount of the Convertible Notes (Note 5). In 2019, the Company incurred issuance costs of $200,587 in connection with this offering.

The Company received funds for issuance of an additional 468,315 shares of Series A Preferred Stock for gross cash proceeds of $4,004,975 through December 31, 2019. Of these shares, 410,436 shares of Series A Preferred Stock for gross cash proceeds of $3,509,802 exceeded the authorized amount allowed by the articles of incorporation, resulting in a liability of $3,509,802 and a total of 1,966,043 shares of Series A Preferred Stock outstanding at December 31, 2019. In January 2020, the shares that were previously classified as a

liability as of December 31, 2019 were reclassified to temporary equity upon the approved increase to authorized shares of Series A Preferred Stock.

In January 2020, the Company issued 119,454 additional shares of Series A Preferred Stock for gross cash proceeds of $1,021,413. The Company incurred issuance costs of $23,610 in connection with the financing in January 2020.

Series B Preferred Stock

In December 2020, the Company authorized the sale and issuance of up to 6,032,183 shares of Series B Preferred Stock, $0.001 par value per share, at an original issuance price of $10.2782 per share. The Series B Preferred Stock financing was structured to close in two tranches. The first tranche closed in December 2020 and the Company issued 3,619,292 shares of Series B Preferred Stock for gross cash proceeds of $37,199,929. The Company incurred issuance costs of $216,019 in connection with the financing in December 2020.

The Company determined the right of the investors to purchase 2,412,853 shares of Series B Preferred Stock in the second tranche does not meet the definition of a freestanding financial instrument as it is not separable from the Series B Preferred Stock issued in the first tranche. The issuance of the second tranche is subject to the Company meeting certain development milestones or at the election of the holders of at least a majority of the then outstanding shares of Series B Preferred Stock which must include one specific shareholder (the “Requisite Holders”). Each holder of Series B Preferred Stock may elect to purchase their requisite shares of the second tranche at any time. As of March 31, 2021, the Company has not met these development milestones nor did the Requisite Holders elect to purchase the second tranche prior to meeting these milestones and therefore no shares of the second tranche were issued.

In April and May 2021, all 2,412,853 shares of the second tranche of Series B Preferred Stock were issued based on the voluntary election of substantially all of the holders of Series B Preferred Stock. The Company received gross proceeds of $24,799,786.

As of March 31, 2021, the rights and preferences of the Series A Preferred Stock and Series B Preferred Stock (“Preferred Stock”) are as follows:

Conversion

Each share of Preferred Stock may be converted at any time, at the option of the holder, into shares of Class A common stock, subject to the applicable conversion rate as determined by dividing the original issue price by the conversion price. The conversion price for the Series A Preferred Stock and Series B Preferred Stock (as may be adjusted for certain customary dilutive events) is $8.5514 and $10.2782, respectively. The Preferred Stock automatically convert into shares of Class A common stock at the then effective conversion rate upon

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO UNAUDITED INTERIM CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 5 — Convertible Preferred Stock (Continued)

the closing of a public offering of the Company's securities with gross proceeds to the Company of at least $75,000,000 and a share price of at least $10.2782 or at the election of the holders of the Requisite Holders.

Holders of Series B Preferred Stock that would beneficially own at least 9.9% of any then outstanding class of equity securities may elect to receive a portion of their converted Series B Preferred Stock as Class B common stock upon conversion.

Dividends

Preferred Stockholders are entitled to receive per annum dividends of 7% of the original issue price share, payable only when, as and if declared by the Board of Directors. The right to receive these dividends is not cumulative, and therefore, if not declared in any year, the right to receive such dividends shall terminate and not carry forward into the next year. As of March 31, 2021 and December 31, 2020, no dividends had been declared.

Voting Rights

Preferred Stock and common stock vote together as one class on an as converted basis. Common stock voting rights on certain matters are subject to the powers, preferences, and rights of the Preferred Stock. Preferred

Stockholders are entitled to vote on all matters and shall have the number of votes equal to the number of shares of common stock into which the shares of Preferred Stock held by such holder are then convertible. As long as 2,132,029 shares of Preferred Stock are outstanding, certain actions such as mergers, acquisition, liquidation, dissolution, wind up of business, and deemed liquidation events, must be approved by the holders of at least a majority of the then-outstanding shares of Preferred Stock.

Liquidation Preference

Upon liquidation, dissolution, or winding up of business, holders of Preferred Stock are entitled to receive a liquidation preference in priority to holders of common stock at the original respective Preferred Stock issue price for such series. If assets available for distribution are insufficient to satisfy the liquidation payment to holders of Preferred Stock in full, assets available for distribution will be allocated among holders of Preferred Stock on a pari passu basis at an amount per share equal to the greater of the respective original Preferred Stock issue price for such series plus any declared but unpaid dividends or such amount had all shares been converted to common stock.

When holders of Preferred Stock are satisfied in full, any excess assets available for distribution will be allocated ratably among common stock holders based on their pro rata shareholdings. Upon a deemed liquidation event, as defined in the articles of incorporation, holders have the option to redeem their shares at the liquidation payment amounts summarized above.

Redemption

Other than described above, the shares of Preferred Stock are not redeemable.

Note 6 — Common Stock

As of March 31, 2021 and December 31, 2020, the Company has 15,733,000 authorized shares of Class A common stock, $0.001 par value per share, of which 3,535,811 are issued and outstanding. The holders of Class A common stock are entitled one vote for each share of common stock. Dividends may be paid when, and if declared by the Board of Directors, subject to the limitations, powers and preferences granted to the Preferred stockholders and on a proportionate basis with holders of Class B common stock.

As of March 31, 2021 and December 31, 2020, the following number of shares of Class A common stock have been reserved:

Note 6 — Common Stock (Continued)

	March 31, 2021	December 31, 2021
Conversion of Series A Preferred	2,495,933	2,495,933
Conversion of Series B Preferred	3,619,292	3,619,292
Exercise of common stock warrants	220,220	220,220
Exercise of common stock options	1,446,528	1,286,618
	7,781,973	7,622,063

As of March 31, 2021 and December 31, 2020, the Company has 6,032,183 authorized shares of Class B common stock, $0.001 par value per share, of which no shares have been issued nor are outstanding. The holders of Class B common stock have no voting rights. Dividends may be paid when, and if, declared by the Board of Directors, subject to the limitations, powers and preferences granted to the preferred stockholders and on a proportionate basis with holders of Class A common stock.

Common Stock Warrants

During 2019, the Company issued warrants to purchase an aggregate of 220,220 shares of common stock at an exercise price of $4.21 per share to several advisors, including 143,560 shares to entities related to members of the Board of Directors of the Company, in lieu of cash payments. These warrants vested immediately upon issuance, became exercisable on January 9, 2021 and have a 10-year term set to expire on January 9, 2030. The Company evaluated the terms of these warrants and determined that equity classification was appropriate. As of March 31, 2021, no warrants have been exercised.

Note 7 — Net Loss Per Share Attributable to Common Stockholders

Net loss per share of common stock is computed using the two-class method required for multiple classes of common stock and participating securities based upon their respective rights to receive dividends as if all income for the period has been distributed. The rights, including the liquidation and dividend rights and sharing of losses, of the Class A and Class B common stock are identical, other than voting rights. As the liquidation and dividend rights and sharing of losses are identical, the undistributed earnings are allocated on a proportionate basis and the resulting net loss per share attributed to common stockholders is therefore the same for Class A and Class B common stock on an individual or combined basis.

The Company’s participating securities include the Company’s Preferred Stock, as the holders are entitled to receive noncumulative dividends in the event that a dividend is paid on common stock. The holders of Preferred Stock do not have a contractual obligation to share in losses of the Company, and therefore during periods of loss there is no allocation required under the two-class method.

Basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period, adjusted for outstanding shares that are subject to repurchase.

Diluted net loss per share is computed by giving effect to all potentially dilutive securities outstanding for the period using the treasury stock method or the if-converted method based on the nature of such securities. The Company has reported net losses for all periods presented, therefore diluted net loss per common share attributable to common stockholders is the same as basic net loss per common share attributable to common stockholders, because potentially dilutive common shares are not assumed to have been issued if their effect is anti-dilutive.

Basic and diluted net loss per share attributable to common stockholders was calculated at March 31, 2021 and 2020 as follows:

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO UNAUDITED INTERIM CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 7 — Net Loss Per Share Attributable to Common Stockholders (Continued)

	Three Months ended March 31,	
	2021	2020
Numerator:		
Net loss	$(6,229,651)	$(3,200,720)
Denominator — basic and diluted:		
Weighted-average common shares outstanding, basic and diluted	3,535,811	3,535,811
Net loss per share — basic and diluted	$ (1.76)	$ (0.91)

The following table sets forth the potentially dilutive securities that have been excluded from the calculation of diluted net loss per share because to include them would be anti-dilutive (in common stock equivalent shares) at March 31, 2021 and 2020:

	Three Months ended March 31,	
	2021	2020
Series A Preferred	2,495,933	2,495,933
Series B Preferred	3,619,292	—
Warrants to purchase common stock	220,220	220,220
Options to purchase common stock	1,446,528	1,122,496
Total shares of common stock equivalents	7,781,973	3,838,649

Unaudited pro forma net loss per share attributable to common stockholders is computed using the weighted-average number of common shares outstanding after giving effect to the conversion of all the Preferred Stock into shares of common stock as if such conversion had occurred at the beginning of the period presented or the date of original issuance, if later.

The following table summarizes the Company's unaudited pro forma net loss per share attributable to common stockholders for the three months ending March 31, 2021:

	Three Months ended March 31, 2021
Numerator:	
Net loss	$(6,229,651)
Denominator:	
Weighted-average common shares outstanding, basic and diluted	3,535,811
Assumed conversion of Series A Preferred and Series B Preferred	6,115,225
Denominator for pro forma basic and diluted	9,651,036
Net loss per share — basic and diluted	$ (0.65)

Note 8 — Stock-Based Compensation

During 2015, the Company established the 2015 Stock Incentive Plan ("Incentive Plan"), under which incentive stock options, nonqualified stock options and common stock may be awarded to employees, directors or consultants of the Company. The options typically vest over a four-year period. At March 31, 2021, the maximum number of shares available for issuance under the Incentive Plan was 2,017,981 shares. At March 31, 2021, the number of shares available for future grants under the Incentive Plan was 570,543 shares. During the

Note 8 — Stock-Based Compensation (Continued)

three months ended March 31, 2021 and 2020, the Company recognized stock-based compensation expense of $182,225 and $272,143, respectively. At March 31, 2021, compensation expense remaining to be recognized for outstanding stock options was $1,736,754 and to be recognized over a weighted-average period of 2.0 years.

The fair value of options granted is calculated on the grant date using the Black-Scholes option valuation model. For the three months ended March 31, 2021, the Company granted 159,910 shares of stock options at a weighted-average grant date fair value of $3.86. For the three months ended March 31, 2020, the Company granted 139,100 shares at a weighted-average grant date fair value of $2.55.

The Company used the following assumptions in its application of the Black-Scholes option pricing model for grants during the three months ended March 31, 2021 and 2020:

	Three Months Ended March 31,	
	2021	2020
Weighted-average risk-free interest rate	1.11% — 1.71%	1.21%
Expected dividend yield	0%	0%
Expected volatility	69.01% — 80.99%	67.30%
Expected term (in years)	5.83 — 10 years	6.01 years

The following table summarizes the stock option activity during the three months ended March 31, 2021 under the Plan:

	Number of Options	Weighted-Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value
Outstanding at of December 31, 2020	1,286,618	$4.22	8.37	
Granted	159,910	$5.77	9.98	
Outstanding at March 31, 2021	1,446,528	$4.39	8.33	$13,378,919
Vested and exercisable at March 31, 2021	710,561	$4.21	7.65	$ 6,700,068
Vested and expected to vest at March 31, 2021	1,446,528	$4.39	8.33	$13,378,919

For the three months ended March 31, 2021 and 2020, the Company recognized share-based compensation expense recognized on the accompanying consolidated statements of operations as follows:

	Three Months Ended March 31,	
	2021	2020
Cost of revenue	$ 22,515	$ 24,917
Research and development	105,703	116,043
General and administrative	54,007	131,183
Total	$182,225	$272,143

Note 9 — Commitments and Contingencies

Operating Leases

The Company leases office space in Cambridge, Massachusetts, New York, New York and beginning on July 1, 2021, San Francisco, California, pursuant to short-term arrangements. The Cambridge and San Francisco leases are on a month-to-month basis, requiring one month's notice before termination. The New

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO UNAUDITED INTERIM CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 9 — Commitments and Contingencies (Continued)

York lease is renewable on a quarterly basis and the last renewal was on June 15, 2021 which extended the lease term until September 30, 2021. The San Francisco lease is renewable on an annual basis. These lease agreements include payments for lease and non-lease components and the Company has elected to not separate such components and these payments were recognized as rent expense.

As of March 31, 2021, total future minimum lease payments for its short-term leases in Cambridge, Massachusetts and New York, New York, was $9,000 all due in 2021. The Company leases storage space for its electronic data equipment in Somerville, Massachusetts. This lease is renewable on an annual basis effective every March 1st. Prior to March 31, 2021, the Company renewed the lease through March 31, 2022. As of March 31, 2021, total future minimum lease payments for this lease were $16,062 due in 2021 and $3,569 due in 2022.

In July 2019, the Company entered into an office lease in San Diego, California ("2019 San Diego Lease") with a lease term of 24 months with no escalations and variable costs based on additional number of employees using the facility. This lease was cancelable upon a 30-day notice period. Upon adoption of ASC 842 on January 1, 2020, a right-to-use asset and lease liability based on the fixed costs was recognized by the Company for $61,822. Effective September 20, 2020, the lease was terminated, and the remaining right-of-use asset and lease liability were derecognized. No gain or loss was recognized for the termination of this lease.

In October 2020, the Company entered into an office lease in San Diego, California ("2020 San Diego Lease") with a lease term of 67 months. At the lease commencement date, a right-to-use asset and lease liability was recognized by the Company for $637,863.

Maturities of the lease liabilities due under the Company's 2020 San Diego Lease as of March 31, 2021 are as follows:

	Amount
Remainder of 2021	$ 83,807
2022	115,430
2023	125,741
2024	161,498
2025	167,150
2026	57,332
Total future lease payments	710,958
Less: Imputed interest	(108,366)
Total lease liabilities	$ 602,592
Current portion lease liability	$ 78,447
Lease liability, noncurrent	524,145
Total lease liability	$ 602,592

Quantitative information regarding the Company's leases for the three months ended March 31, 2021 and 2020 is as follows:

IMMUNEERING CORPORATION AND SUBSIDIARY

NOTES TO UNAUDITED INTERIM CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Note 9 — Commitments and Contingencies (Continued)

	March 31, 2021	March 31, 2020
Lease costs:		
Operating lease cost	$34,251	$10,800
Short-term lease cost	57,346	76,936
Variable lease cost	—	4,500
Total lease costs	$91,597	$92,236
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$27,720	$10,800
Operating cash flows from short-term leases	57,346	76,936
	$85,066	$87,736
Weighted-average remaining lease term — operating leases	5.08 years	6.08 years
Weighted-average discount rate — operating leases	6.0%	6.0%

As the Company's leases typically do not provide an implicit rate, the Company uses an estimate of its incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments.

Litigation

From time to time, the Company may have certain contingent liabilities that arise in the ordinary course of its business activities and may be exposed to litigation in connection with its products and operations. The Company's policy is to assess the likelihood of any adverse judgments or outcomes related to legal matters, as well as ranges of probable losses. When it is probable that future expenditures will be made and can be reasonably estimated the Company will accrue a liability for such matters. Significant judgement is required to determine both probability and estimated amount. The Company is not aware of any material legal matters.

Clinical Research Contracts

The Company may enter into contracts in the normal course of business with clinical research organizations for clinical trials, with contract manufacturing organizations for clinical supplies, and with other vendors for preclinical studies, supplies and other services for our operating purposes. These contracts generally provide for termination with a 30-day notice.

Note 10 — Related Party Transactions

An officer of the Company is a board member of a contract research organization ("CRO") that provides contract services to the Company. Research and development expenses in the accompanying consolidated statement of operations include the cost of services provided by the CRO to the Company which amounted to $1,023,163 and $568,008 for the three months ended March 31, 2021 and 2020, respectively. As of March 31, 2021, March 31, 2020 and December 31, 2020, $378,953, 211,936 and $279,153, respectively, was owed to the CRO and is included in accounts payable or accrued contract research expenses in the accompanying consolidated balance sheets.

Note 11 — Subsequent Events

Management has evaluated subsequent events for recognition and measurement purposes through June 21, 2021, the date the consolidated financial statements were issued, and through July 9, 2021 for disclosure purposes. Management determined that no additional subsequent events had occurred that would require recognition in these consolidated financial statements except as disclosed in Note 5, Note 9, and below.

During June and July 2021 holders of warrants to acquire 220,220 shares of our common stock were exercised for net proceeds of approximately $927,000.

Shares

Class A Common Stock

PROSPECTUS

MORGAN STANLEY *JEFFERIES* *COWEN* *GUGGENHEIM SECURITIES*

Through and including , 2021 (25 days after the date of this prospectus), all dealers effecting 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 obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

, 2021

Part II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimated except the Securities and Exchange Commission registration fee, the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee and the Nasdaq listing fee.

	Amount
SEC registration fee	$10,910
FINRA filing fee	15,500
Initial listing fee	*
Accountants' fees and expenses	*
Legal fees and expenses	*
Blue Sky fees and expenses	*
Transfer Agent's fees and expenses	*
Printing and engraving expenses	*
Miscellaneous expenses	*
Total	$ *

* To be filed by amendment.

Item 14. Indemnification of Directors and Officers.

Section 102 of the DGCL permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our certificate of incorporation to be effective upon the corporate conversion will provide that no director of the Registrant shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the DGCL prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the DGCL provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, ending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our certificate of incorporation to be effective upon the corporate conversion will provide that we will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than an action by or in the right of us) by reason of the fact that

he or she is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our restated certificate of incorporation provides that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

We intend to enter into indemnification agreements with each of our directors and officers. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement we enter into in connection with the sale of Class A common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, us, our directors, our officers and persons who control us within the meaning of the Securities Act, against certain liabilities.

Item 15. Recent Sales of Unregistered Securities.

During the past three years, we issued securities that were not registered under the Securities Act as set forth below. The following is a summary of transactions during the preceding three fiscal years involving sales of our securities that were not registered under the Securities Act:

(a) Issuance of Capital Stock

On July 28, 2015, certain shareholders sold 4,180,820 shares of common stock to Teva Pharmaceuticals USA, Inc., or Teva, for a total amount of $44,998,166. In January 2018, the Company terminated its contract with Teva and Teva returned 3,827,239 shares of common stock to the Company. On May 28, 2020, Teva sold 353,581 shares of common stock to certain shareholders for a total amount of $1,538,077.

From September 2019 to January 2020, we issued and sold to investors in a private placement an aggregate of 1,710,227 shares of Series A Preferred Stock at a purchase price of $8.5514 per share, for aggregate consideration of approximately $14.6 million. In conjunction with the issuance of Series A Preferred Stock in September 2019, we issued 785,706 shares of Series A Preferred Stock as settlement for $5.3 million of convertible notes and $0.1 million of accrued interest.

On December 31, 2020, we issued and sold to investors in a private placement an aggregate of 3,619,292 shares of Series B Preferred Stock at a purchase price of $10.2782 per share, for an aggregate consideration of

approximately $37.2 million. In addition, in April and May 2021, we issued and sold to investors in a private placement an additional 2,412,853 shares of Series B Preferred Stock at a purchase price of $10.2782 per share, for an aggregate consideration of approximately $24.8 million.

No underwriters were involved in the foregoing issuances of securities. The securities described in this section (a) of Item 15 were issued to investors in reliance upon the exemption from the registration requirements of the Securities Act, as set forth in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder relative to transactions by an issuer not involving any public offering, to the extent an exemption from such registration was required. The recipients of securities in the transactions described above represented that they were accredited investors and were acquiring the securities for their own account for investment purposes only and not with a view to, or for sale in connection with, any distribution thereof and that they could bear the risks of the investment and could hold the securities for an indefinite period of time and appropriate legends were affixed to the instruments representing such securities issued in such transactions.

(b) Stock Option Grants, Option Exercises, Warrant Grants and Warrant Exercises

Since January 1, 2018, we granted to our employees, officers, directors and other persons who provide services to us options to purchase up to 2,058,828 shares of Class A common stock under the 2015 Plan, at a weighted average exercise price of $7.40 per share. 336,234 of these options were terminated, expired without being exercised or were otherwise forfeited. In addition, we granted to certain of our directors and other persons who provided services to us warrants to purchase up to 220,220 shares of our Class A common stock at $4.21 per share, which expire on January 8, 2030 and vested immediately. All of these warrants were exercised.

No underwriters were involved in the foregoing issuances of securities. The issuances of stock options described in this paragraph (b) of Item 15 were issued pursuant to written compensatory plans or arrangements with our employees, directors, consultants and advisors, in reliance on the exemption provided by Rule 701 promulgated under the Securities Act, or pursuant to Section 4(a)(2) under the Securities Act, relative to transactions by an issuer not involving any public offering, to the extent an exemption from such registration was required. All recipients either received adequate information about us or had access, through employment or other relationships, to such information.

Item 16. Exhibits and Financial Statements.

Exhibit No.	Description of Exhibit
1.1*	Form of Underwriting Agreement.
3.1	Fourth Amended and Restated Certificate of Incorporation of the Registrant (currently in effect).
3.2	Third Amended and Restated By-Laws of the Registrant (currently in effect).
3.3*	Form of Amended and Restated Certificate of Incorporation of the Registrant (to be in effect upon the consummation of this offering).
3.4*	Form of Amended and Restated Bylaws of the Registrant (to be in effect upon the consummation of this offering).
4.1*	Specimen Stock Certificate evidencing the shares of Class A common stock.
5.1*	Opinion of Latham & Watkins LLP.
10.1	Amended and Restated Investors' Rights Agreement, dated December 21, 2020, by and among the Registrant and the other parties thereto.
10.2	Master Services Agreement, dated August 5, 2019, by and between Bioarkive LLC and the Registrant.
10.3	Advisory Agreement, dated September 17, 2019, by and between PEF LLC and the Registrant.
10.4†	Immuneering Corporation 2008 Stock Incentive Plan and form of option agreement thereunder.
10.5†	Immuneering Corporation Long Term Incentive Plan and form of option agreement thereunder.
10.6†*	Employment Letter Agreement, dated March 5, 2021, by and between Biren Amin and the Registrant.
10.7†*	Employment Letter Agreement, dated October 24, 2019, by and between Brett Hall, Ph.D. and the Registrant.
10.8†*	Employment Letter Agreement, dated October 11, 2019, by and between Scott Barrett, M.D. and the Registrant.
10.9†*	2021 Incentive Award Plan and forms of award agreements thereunder.
10.10†*	2021 Employee Stock Purchase Plan.
21.1*	List of Subsidiaries of the Registrant.
23.1	Consent of RSM US LLP, independent registered public accounting firm.
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).

* To be filed by amendment.

† Indicates a management contract or compensatory plan or arrangement.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriter, at the closing 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.

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 Securities and Exchange Commission 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 undersigned hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, 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, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in New York, New York, on this 9th day of July, 2021.

IMMUNEERING CORPORATION

By: /s/ Benjamin J. Zeskind

Benjamin J. Zeskind, Ph.D.
Co-Founder, President, Chief Executive Officer and Director

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of Immuneering Corporation, hereby severally constitute and appoint Benjamin J. Zeskind and Biren Amin, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them for him and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement (or any other 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 other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities held on the dates indicated.

Signature	Title	Date
/s/ Benjamin J. Zeskind Benjamin J. Zeskind, Ph.D.	Co-Founder, President, Chief Executive Officer and Director (Principal Executive Officer)	July 9, 2021
/s/ Biren Amin Biren Amin	Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)	July 9, 2021
/s/ Ann E. Berman Ann E. Berman	Director	July 9, 2021
/s/ Robert J. Carpenter Robert J. Carpenter	Co-Founder and Chairman	July 9, 2021
/s/ Peter Feinberg Peter Feinberg	Director	July 9, 2021
/s/ Laurie B. Keating Laurie B. Keating	Director	July 9, 2021
/s/ Andrew Phillips Andrew Phillips, Ph.D.	Director	July 9, 2021

Exhibit 3.1

FOURTH AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
IMMUNEERING CORPORATION

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Immuneering Corporation, 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 Immuneering Corporation, and that this corporation was originally incorporated pursuant to the General Corporation Law on February 14, 2008 under the name Immuneering Corporation.

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the Third Amended and Restated Certificate of Incorporation of this corporation, 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 Third Amended and Restated Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Immuneering Corporation (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, 19808. 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 (i) 15,733,000 shares of Class A Common Stock, $0.001 par value per share ("**Class A Common Stock**"), (ii) 6,032,183 shares of Class B Common Stock, $0.001 par value per share ("**Class B Common Stock**"), and (ii) 8,528,116 shares of Preferred Stock, $0.001 par value per share ("**Preferred Stock**"), of which 2,495,933 shares are hereby designated "**Series A Preferred Stock**" and 6,032,183 shares are hereby designated "**Series B Preferred Stock**". Upon the acceptance of this Fourth Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware (the "**Effective Time**"), each share of Common Stock of the Corporation outstanding immediately prior to the Effective Time shall, without any further action by any stockholder, be reclassified as, and shall become, one share of Class A Common Stock. Any stock certificate that immediately prior to the Effective Time, be deemed to represent the same number of shares of Class A common Stock, without the need for surrender or exchange thereof. As of the effective time, any references to "**Common Stock**" in this Fourth Amended and Restated Certificate of Incorporation (this "**Amended and Restated Certificate of Incorporation**") shall mean Class A Common Stock or Class B Common Stock unless specifically stated otherwise. As of the effective time, any references to "**Common Stock**" in any incentive plans (or agreements related thereto) or other similar arrangements to which the Corporation is, or may become, a party, shall be deemed to mean Class A Common Stock unless specifically stated otherwise.

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 Class A Common Stock and Class B 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 Class A Common Stock are entitled to one vote for each share of Class A 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 Class A 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 of Preferred Stock 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. There shall be no cumulative voting.

Except as otherwise required by law, holders of Class B Common Stock shall not be entitled to vote on any matter on which the holders of Class A Common Stock or Preferred Stock shall be entitled to vote, and shares of Class B Common Stock shall not be included in determining the number of shares of common stock voting or entitled to vote on any such matters. Shares of Class B Common Stock shall not be certificated, but shall instead be held in book-entry form on the books and records of the Corporation.

The number of authorized shares of Class A Common Stock and/or Class B Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding or, in the case of the Class B Common Stock, below the number of shares thereof reserved for issuance pursuant to Section 1.5 of the Series B Purchase Agreement (as defined in Subsection 5A.3.4 below)) 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.

Except as expressly set forth in this Article Fourth with respect to voting rights only, the Class B Common Stock shall have the same rights and powers of, rank equally to, share ratably with and be identical in all respects and as to all matters to Class A Common Stock. If the Corporation in any manner subdivides or combines the shares of Class A Common Stock, then the shares of Class B Common Stock will be subdivided or combined in the same proportion and manner, and if the Corporation in any manner subdivides or combines the shares of Class B Common Stock, then the outstanding shares of Class A Common Stock will be subdivided or combined in the same proportion and manner.

B. PREFERRED STOCK

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. For purposes of this Amended and Restated Certificate of Incorporation, the term "**Cormorant**" shall mean, collectively, Cormorant Private Healthcare Fund III, LP, Cormorant Global Healthcare Master Fund, LP and CRMA SPV, LP.

1. Dividends.

1.1 Treatment of Preferred Stock. The holders of Preferred Stock shall be entitled to receive dividends, out of any assets legally available therefor, prior and in preference to any declaration or payment of any dividend (payable other than in Common Stock or other securities and rights convertible into or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock of the Corporation) at the rate of seven percent (7%) of the applicable Original Issue Price (as defined below) per share of Preferred Stock per annum (the "**Preferred Dividend**"), payable only when, as and if declared by the Board of Directors of the Corporation (the "**Board of Directors**"). No dividends other than those payable solely in Common Stock shall be paid on any Common Stock unless and until the aforementioned dividend is paid on each outstanding share Preferred Stock and (ii) a dividend is paid with respect to all outstanding shares of Preferred Stock in accordance with Subsection 1.2. The right to receive dividends on Preferred Stock shall not be cumulative, and therefore, if not declared in any year, the right to receive such dividends shall terminate and not carry forward into the next year. The "**Series A Original Issue Price**" shall mean $8.5514 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 $10.2782 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 applicable "**Original Issue Price**" shall mean the Series A Original Issue Price with respect to the Series A Preferred Stock and the Series B Original Issue Price with respect to the Series B Preferred Stock.

1.2 Treatment of Common Stock. If, after dividends in the full preferential amounts specified in Subsection 1.1 for the Preferred Stock have been paid or declared and set apart in any calendar year of the Corporation, the Board of Directors shall declare additional dividends out of funds legally available therefor in that calendar year, then such additional dividends shall be declared pro rata on the Common Stock and the Preferred Stock on a pari passu basis according to the number of shares of Common Stock held by such holders, where each holder of shares of Preferred Stock is to be treated for this purpose as holding the greatest whole number of shares of Common Stock then issuable upon conversion of all shares of Preferred Stock held by such holder pursuant to Section 4.

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 or 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 the greater of (i) the applicable Original Issue Price, plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of such series of Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amounts payable pursuant to this sentence, as applicable to each series of Preferred Stock, is hereinafter referred to as the "**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, after the payment in full of all preferential Liquidation Amounts required to be paid to the holders of Preferred Stock, 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 Subsection 2.1 or the remaining Available Proceeds, as the case may be, 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 of the outstanding shares of Preferred Stock, voting together as a single class and calculated on an as-converted basis; and (ii) the holders of a majority of the outstanding shares of the Series B Preferred Stock, exclusively and as a separate class, including Cormorant (collectively, the holders referred to in clauses (i) and (ii), the "**Requisite Holders**"), elect otherwise by written notice sent to the Corporation at least five (5) 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, at least 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;

(b) any transaction or series of related transactions to which the Corporation is a party in which fifty percent (50%) or more of the voting power of the Corporation is transferred; or

(c) (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), 2.3.1(b) or 2.3.1(c), 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 of the then outstanding shares of Preferred Stock, calculated on an as-converted basis, 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)**,** 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 Preferred Stock at a price per share equal to the applicable 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 provisions of Section 6 shall apply, with such necessary changes in the details thereof as are necessitated by the context, to the redemption of the Preferred Stock pursuant to this Subsection 2.3.2(b). 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.

(c) To the extent that (i) the consideration payable to the stockholders of the Corporation in a Deemed Liquidation Event includes shares of a class of voting capital stock of any successor or parent corporation that is registered under Section 12(b) or 12(g) of the Exchange Act and the rules and regulations promulgated thereunder, and (ii) at the time of the consummation of such Deemed Liquidation Event, there is one or more Electing Investors (as defined in the Series B Purchase Agreement), then, as a condition to the effectiveness of such Deemed Liquidation Event, the Merger Agreement (or such other agreement to effect such Deemed Liquidation Event) shall provide that the consideration payable to the Electing Investor shall be subject to, and comply with, the Limitation (as defined in the Series B Purchase Agreement), *mutatis mutandis*, such that no Electing Investor would, after consummation, become in the aggregate, directly or indirectly, the beneficial owner(s) of more than the Limitation of such class of voting stock of such successor or parent corporation, with the balance of any shares to be issued in non-voting stock that is convertible into voting stock of such successor or parent corporation with appropriate conversion limitations. The term "beneficial owner" (and its correlates "beneficially own" and "beneficial ownership") shall have the meaning given such terms in Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder.

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. The value of such property, rights or securities shall be determined in good faith by the Board of Directors.

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 Class A 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 (as reduced pursuant to the Limitation of any Electing Investor, as applicable). 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 Class A 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 B Preferred Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation (the "**Series B Director**"), the holders of record of Series A Preferred Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation (the "**Series A Director**", collectively with the Series B Director, the "**Preferred Directors**"), and the holders of record of the shares of Class A Common Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation. For administrative convenience, the initial Series B Director may also be appointed by the Board of Directors in connection with the approval of the initial issuance of Series B Preferred Stock without a separate action by the holders of record of the shares of Series B Preferred Stock. Any director elected as provided in the first sentence of this Subsection 3.2 may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, 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, Series B Preferred Stock or Class A Common Stock, as the case may be, 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, Series B Preferred Stock or Class A Common Stock, as the case may be, 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; *provided*, *however*, that, notwithstanding the foregoing or the provisions of Section 223(a)(1) and 223(a)(2) of the Delaware General Corporation Law, for administrative convenience, the initial Preferred Directors may be appointed by the Board without a separate action by the holders of record of the shares of Preferred Stock. The holders of record of the shares of Class A Common Stock and of any other class or series of voting stock (including the Preferred Stock), exclusively and voting together as a single class on an as-converted basis, 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. The rights of the holders of the Series A Preferred Stock under the first sentence of this Subsection 3.2 to elect the Series A Director shall terminate on the first date following the Series B Original Issue Date (as defined below) on which there are issued and outstanding less than 496,995 shares of Series A 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 A Preferred Stock). The rights of the holders of the Series B Preferred Stock under the first sentence of this Subsection 3.2 shall terminate on the first date following the Series B Original Issue Date on which there are issued and outstanding less than 1,508,045 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).

3.3 Preferred Stock Protective Provisions. At any time when at least 2,132,029 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) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation 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 holders of a majority of the then outstanding shares of Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class on an as-converted basis, 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 Corporation, effect any merger or consent to any of the foregoing;

liquidate, dissolve or wind-up the business and affairs of the consolidation or any other Deemed Liquidation Event, or

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 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 voting, or increase the authorized number of shares of 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 or voting;

3.3.4 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 (other than equipment leases), 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, if the aggregate indebtedness of the Corporation and its subsidiaries for borrowed money following such action would exceed $250,000, unless such debt security has received the prior approval of the Board of Directors, including the approval of all of the Preferred Directors;

3.3.5 create, or hold capital stock in, any subsidiary that is not wholly owned (either directly or through one or more other subsidiaries) by the Corporation, or permit any subsidiary to 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;

3.3.6 guarantee, directly or indirectly, or permit any subsidiary to guarantee, directly or indirectly, any indebtedness except for trade accounts of the Company or any subsidiary arising in the ordinary course of business;

3.3.7 increase or decrease the authorized number of directors constituting the Board of Directors; or

3.3.8 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) 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 the lower of the original purchase price or the then-current fair market value thereof or (ii) as approved by the Board of Directors, including the approval of all of the Preferred Directors.

3.4 Series A Preferred Stock Protective Provisions. At any time when at least 496,995 shares of Series A 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 A Preferred Stock) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the holders of a majority of the then outstanding shares of Series A Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a 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:

3.4.1 alter, amend or waive the rights, preferences, or privileges of the Series A Preferred Stock;

3.4.2 amend, alter, waive or repeal any provision of this Amended and Restated Certificate of Incorporation or Bylaws in a manner that adversely affects the powers, preferences or rights of the Series A Preferred Stock; or

3.4.3 increase the authorized number of shares of Series A Preferred Stock.

3.5 Series B Preferred Stock Protective Provisions. At any time when at least 1,508,045 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) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following , or permit or cause any of its subsidiaries to do any of the following, without (in addition to any other vote required by law or the Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the holders of a majority of the then outstanding shares of Series B Preferred Stock, including Cormorant, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a 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:

3.5.1 alter, amend, waive or repeal the rights, preferences, or privileges of the Series B Preferred Stock;

3.5.2 amend, alter, waive or repeal any provision of this Amended and Restated Certificate of Incorporation or Bylaws in a manner that adversely affects the powers, preferences or rights of the Series B Preferred Stock;

3.5.3 increase the authorized number of shares of Series B Preferred Stock;

3.5.4 create, or authorize the creation of, or issue or obligate itself to issue shares of, or reclassify, any capital stock unless the same ranks junior to the Series B Preferred Stock with respect to its rights, preferences and privileges; or

3.5.5 effect any Deemed Liquidation Event, or consent to any Deemed Liquidation Event, in which the proceeds per share resulting from such Deemed Liquidation Event paid or distributed to holders of Series B Preferred Stock with respect to the Series B Preferred Stock in connection with the closing of such Deemed Liquidation Event are less than the Series B Original Issue Price.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"), with it being understood that, subject to Subsection 4.11, all references to "Common Stock" in this Article IV, Section 4, shall be deemed to mean Class A Common Stock:

4.1 Right to Convert.

4.1.1 Conversion Ratio. 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; provided that such holder may waive such option to convert pursuant to this Section 4.1.1 upon written notice to the Company. The "**Conversion Price**" for any series of Preferred Stock shall initially be equal to the applicable Original Issue Price for such series of Preferred Stock. Such initial Conversion Price, and the rate at which shares of Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. 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. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

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, 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, (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 the 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 the 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 Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the 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 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 Preferred Stock and of such series of Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Conversion Price shall be made for any declared but unpaid dividends on the shares of the applicable series of 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 Conversion Price 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 B Original Issue Date**" shall mean the date on which the first share of Series B 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 B 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 Series A 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 all of the Preferred Directors (for the avoidance of doubt, if a plan, agreement or arrangement is approved by the Board of Directors, including the approval of all of the Preferred Directors, all shares of Common Stock or Options issued thereunder in accordance with this clause (iii) shall be deemed Exempted Securities); provided further that all shares of Common Stock or Options issued pursuant to an existing plan, agreement or arrangement shall be deemed Exempted Securities;

(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, 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 all of the Preferred Directors; or

(vi) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors, including the approval of all of the Preferred Directors.

4.4.2 No Adjustment of Conversion Price. No adjustment in the Conversion Price with respect to the Series A Preferred Stock 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 then 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 Conversion Price with respect to the Series B Preferred Stock 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 then outstanding shares of Series B Preferred Stock, including Cormorant for so long as Cormorant continues to own at least 326,305 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) after the Initial Closing (as defined in the Series B Purchase Agreement) and at least 603,841 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) after the Milestone Closing (as defined in the Series B Purchase Agreement), 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 B 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 a 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 Conversion Price as would have 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 a 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 B Original Issue Date), are revised after the Series B 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 a Conversion Price pursuant to the terms of Subsection 4.4.4, the applicable Conversion Price shall be readjusted to such Conversion Price as would have 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 a 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 a 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 Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time or from time to time after the Series B 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 a 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:

$$CP2 = CP1^* (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP2" shall mean the applicable Conversion Price in effect immediately after such issuance or deemed issuance of Additional Shares of Common Stock

(b) "CP1" 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 issue);

(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 CP1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP1); 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 issue, as determined in good faith by the Board of Directors; 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.

(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 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 B Original Issue Date effect a subdivision of the outstanding Common Stock, each Conversion Price in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of the applicable series of Preferred Stock 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 B Original Issue Date combine the outstanding shares of Common Stock, then each Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of the applicable series of Preferred Stock 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 B 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 each 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, each Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter each Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of the applicable series of Preferred Stock 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 such series of Preferred Stock had been converted into 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 B 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 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 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation 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 Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation 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) 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 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 a 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 the applicable series of Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Preferred Stock 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 Preferred Stock (but in any event not later than ten (10) days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the 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 applicable series of Preferred Stock.

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.

4.11. Beneficial Ownership Limitations. Any capitalized but undefined term used in this Subsection 4.11 shall have the meaning ascribed to such term in the Series B Purchase Agreement. Notwithstanding anything to the contrary herein, no Electing Investor shall be entitled to receive, and the Corporation shall not deliver to the Electing Investor, shares of Class A Common Stock upon conversion of the Series B Preferred Stock to the extent (but only to the extent) that, after such receipt, such converting Electing Investor would beneficially own shares of Class A Common Stock in excess of the Limitation (such shares above the Limitation, the "**Excess Securities**"), and in lieu of the Excess Securities, the Corporation shall deliver to the Electing Investor the number of shares of Class B Common Stock equal to the number of the Excess Securities in book-entry form. Any conversion notice provided by a converting Electing Investor under Subsection 4.3 shall constitute the converting Electing Investor's acknowledgement and confirmation that (i) after the acquisition of the shares of Class A Common Stock sought in the conversion, such Electing Investor will not be in the aggregate, directly or indirectly, the beneficial owner of more shares of Class A Common Stock than permitted by the Limitation and (ii) any Excess Securities to which the Electing Investor would otherwise be entitled will be satisfied solely by the delivery of Class B Common Stock equal to the number of such Excess Securities. Any purported delivery of shares of Class A Common Stock upon conversion of Series B Preferred Stock shall be void *ab initio* and shall have no effect to the extent (but only to the extent) that such delivery would result in the converting Electing Investor becoming in the aggregate, directly or indirectly, the beneficial owner of more shares of Class A Common Stock than permitted by the Limitation, it being understood that the Corporation shall only deliver shares of Class B Common Stock to the Electing Investor on account of any Excess Securities. Within two (2) business days of any request by a holder of Series B Preferred Stock, the Corporation shall inform such holder in writing of the then current number of outstanding shares of Class A Common Stock and Class B Common Stock.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public at a price of at least $10.2782 per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock), in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $75,000,000, net of the underwriting discount and commissions, to the Corporation and in connection with such offering the Common Stock is listed for trading on the Nasdaq Stock Market's National Market, the New York Stock Exchange or another exchange or marketplace approved the Board of Directors or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the Requisite Holders (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 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) 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 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 Preferred Stock accordingly

5.3 Beneficial Ownership Limitation. Notwithstanding anything to the contrary herein, in connection with any mandatory conversion pursuant to this Section 5, no Electing Investor shall be entitled to receive, and the Corporation shall not deliver to the Electing Investor, shares of Class A Common Stock to the extent (but only to the extent) that the Electing Investor would beneficially own any Excess Securities, and in lieu of the Excess Securities, the Corporation shall deliver to the Electing Investor the number of shares of Class B Common Stock equal to the number of the Excess Securities in book-entry form. Any purported delivery of shares of Class A Common Stock upon conversion of Series B Preferred Stock shall be void *ab initio* and shall have no effect to the extent (but only to the extent) that, after such delivery, the converting Electing Investor would be in the aggregate, directly or indirectly, the beneficial owner of more shares of Class A Common Stock than permitted by the Limitation, it being understood that the Corporation shall only deliver shares of Class B Common Stock to the Electing Investor on account of any Excess Securities. Within two (2) business days of any request by a holder of Series B Preferred Stock, the Corporation shall inform such holder in writing of the then current number of outstanding shares of Class A Common Stock and Class B Common Stock.

5A.1. Trigger Event. In the event that any holder of shares of Series B Preferred Stock is a Defaulting Purchaser (as defined in the Series B Purchase Agreement) or otherwise does not purchase such Holder's Milestone Shares at or prior to the Milestone Closing (as defined below), then each share of Series B Preferred Stock held by such holder shall automatically, and without any further action on the part of such holder, be converted into Common Stock at a rate based on the then-effective Conversion Price of the Series B Preferred Stock, effective upon, subject to, and concurrently with, the consummation of the Milestone Closing. For purposes of determining whether or not a holder of Series B Preferred Stock has purchased all of such Holder's Milestone Shares at or prior to a Milestone Closing, all Milestone Shares purchased by Affiliates (as defined below) of such holder shall be aggregated with the Milestone Shares purchased by such holder (*provided* that no shares or securities shall be attributed to more than one entity or person within any such group of affiliated entities or persons). Such conversion is referred to as a "**Special Mandatory Conversion.**"

5A.2. Procedural Requirements. Upon a Special Mandatory Conversion, each holder of shares of Series B Preferred Stock converted pursuant to Subsection 5A.1 shall be sent written notice of such Special Mandatory Conversion and the place designated for mandatory conversion of all such shares of Series B Preferred Stock pursuant to this Section 5A. Upon receipt of such notice, each holder of such shares of Series B Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that any 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 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 Series B Preferred Stock converted pursuant to Subsection 5A.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the time of the Special Mandatory Conversion (notwithstanding the failure of the holder or holders thereof to surrender any certificates for such shares at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders therefor (or lost certificate affidavit and agreement), to receive the items provided for in the next sentence of this Subsection 5A.2. As soon as practicable after the Special Mandatory Conversion and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Series B Preferred Stock so converted, the Corporation shall (a) 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 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 Series B Preferred Stock converted. Such converted Series B 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 Series B Preferred Stock accordingly.

5A.3. Definitions. For purposes of this Section 5A, the following definitions shall apply:

5A.3.1 "**Affiliate**" shall mean, with respect to any holder of shares of Preferred Stock, any person, entity or firm which, directly or indirectly, controls, is controlled by or is under common control with such holder, including, without limitation, any entity of which the holder is a partner or member, any partner, officer, director, member or employee of such holder and any venture capital fund, registered investment company or other investment fund now or hereafter existing of which the holder is a partner or member which is controlled by or under common control with one or more general partners, managing members or investment advisers of such holder or shares the same management company or investment adviser with such holder.

5A.3.2 A "**Holder's Milestone Shares**" shall have the same meaning as "Purchaser's Milestone Shares" under the Series B Purchase Agreement.

5A.3.3 "**Initial Requisite Purchasers**" shall have the meaning set forth in the Series B Purchase Agreement.

5A.3.4 "**Milestone Closing**" shall mean a Milestone Closing as defined in that certain Series B Preferred Stock Purchase Agreement dated as of the Series B Original Issue Date (the "**Series B Purchase Agreement**"), unless the Initial Requisite Purchasers elect, by written notice sent to the Corporation at least ten (10) days prior to the consummation of the Milestone Closing, that such transaction not be treated as a Milestone Closing for purposes of this Section 5A.

5A.3.5 "**Milestone Shares**" shall have the meaning set forth in the Series B Purchase Agreement.

6. Redemption.

6.1 General. Except as provided in Subsection 2.3.2, the Preferred Stock shall not be subject to mandatory redemption by the Corporation.

6.2 Redemption Notice. 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 each Redemption Date. Each Redemption Notice shall state:

(a) the number of shares of Preferred Stock held by the holder that the Corporation shall redeem on the Redemption Date specified in the Redemption Notice;

(b) the Redemption Date and the price at which shares of Preferred Stock are to be redeemed (the "**Redemption Price**");

(c) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Subsection 4.1); and

(d) 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.

6.3 Surrender of Certificates; Payment. On or before the applicable Redemption Date, each holder of shares of Preferred Stock to be redeemed on such 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 Redemption Price 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.

6.4 Rights Subsequent to Redemption. If the Redemption Notice shall have been duly given, and if on the applicable Redemption Date the Redemption Price payable upon redemption of the shares of Preferred Stock to be redeemed on such 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, dividends with respect to such shares of Preferred Stock shall cease to accrue after such Redemption Date and all rights with respect to such shares shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Redemption Price without interest upon surrender of any such certificate or certificates therefor.

7. 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.

8. Waiver. Except as otherwise set forth herein, any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of Preferred Stock by the affirmative written consent or vote of the holders of at least a majority of the shares of Preferred Stock then outstanding; *provided* that no provision in this Amended and Restated Certificate of Incorporation (i) related to the rights of an Electing Investor to convert shares of such Electing Investor's Series B Preferred Stock into shares of Class B Common Stock, (ii) related to the rights of an Electing Investor to convert shares of such Electing Investor's Class B Common Stock into Class A Common Stock, (iii) related to the rights of an Electing Investor to convert shares of such Electing Investor's Class A Common Stock to Class B Common Stock or (iv) related to the limitation on the issuance to an Electing Investor of a class of voting capital stock of any successor or parent corporation that is subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act in connection with a Deemed Liquidation Event and the issuance of such other corporation's non-voting securities in lieu thereof, in each case in accordance with this Amended and Restated Certificate of Incorporation, may be amended, modified or waived without the consent of such Electing Investor for so long as such Electing Investor either owns Class B Common Stock or Series B Preferred Stock.

9. 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.

10. Section 16 Limitation Matters. Subject to the terms of this Section 10, shares of Class B Common Stock shall be convertible into a corresponding number of Class A Common Stock upon written notice by the holder thereof. Any capitalized but undefined term used in this Section 10 shall have the meaning ascribed to such term in the Series B Purchase Agreement.

10.1 Related Holders. Notwithstanding anything to the contrary herein (but subject to Subsection 10.2), no holder of Class B Common Stock shall be entitled to receive, and the Corporation shall not deliver to any such holder, any Class A Common Stock upon conversion of the Class B Common Stock to the extent (but only to the extent) that, after such receipt, such converting holder and its Affiliates (together, the "**Related Holders**") would beneficially own in the aggregate, directly or indirectly, shares of Class A Common Stock in excess of 9.9% of such shares outstanding at such time (the "**Section 16 Limitation**"). For avoidance of doubt, in the event that the Related Holders beneficially own in the aggregate, directly or indirectly, shares of Class A Common Stock in excess of the Section 16 Limitation without taking into account the conversion of Class B Common Stock, then none of the Class B Common Stock shall be convertible until such time as the Related Holders no longer beneficially own in the aggregate, directly or indirectly, shares of Class A Common Stock in excess of the Section 16 Limitation. Any conversion notice provided by a converting holder under this Section 10 shall constitute the converting holder's acknowledgement and confirmation that (i) the acquisition of the shares of Class A Common Stock sought in the conversion notice will not result in Related Holders becoming in the aggregate, directly or indirectly, the beneficial owner of more shares of Class A Common Stock than permitted by the Section 16 Limitation and (ii) any Class A Common Stock to which the Electing Investor would be entitled but for the Section 16 Limitation will remain Class B Common Stock. Any purported delivery of shares of Class A Common Stock upon conversion of Class B Common Stock shall be void *ab initio* and shall have no effect to the extent (but only to the extent) that such delivery would result in the Related Holders becoming in the aggregate, directly or indirectly, the beneficial owner of more shares of Class A Common Stock than permitted by the Section 16 Limitation. Before any holder shall be entitled to exchange any shares of such Class B Common Stock pursuant to this provision, such holder shall give written notice to the Corporation at its principal corporate office, of the election to exchange the same and shall state therein the name or names in which the certificate or certificates for shares of Class A Common Stock are to be issued. The Corporation shall, as soon as practicable thereafter, issue and deliver to the Electing Investor, or to the nominee or nominees of such holder, a certificate or certificates (unless shares of Class A Common Stock are then maintained in book-entry form) for the number of shares of Class A Common Stock to which such holder shall be entitled as aforesaid. Such exchange shall be deemed to have been made immediately prior to the close of business on the date of such written notice, and the person or persons entitled to receive the shares of Class A Common Stock issuable upon such exchange shall be treated for all purposes as the record holder or holders of such shares of Class A Common Stock as of such date. Each share of Class B Common Stock that is exchanged pursuant to this Subsection 10.1 shall be retired by the Corporation and shall not be available for reissuance. Within two (2) business days of any request by a holder of Class B Common Stock, the Corporation shall inform such holder in writing of the then current number of outstanding shares of Class A Common Stock and Class B Common Stock.

10.2 Non-Affiliate Transfer. Any shares of Class B Common Stock shall be exchanged for a corresponding number of fully paid and nonassessable shares of Class A Common Stock immediately upon request following a Non-Affiliate Transfer. A "**Non- Affiliate Transfer**" shall mean a transfer of shares of Class B Common Stock to any Person that is not an Affiliate of a holder of the Class B Common Stock immediately following the issuance thereof. The Corporation shall, upon the request of each such holder and a certification from such transferee holder of such holder's non-affiliation with the original holder of such Class B Common Stock, issue and deliver to such holder new certificates (unless shares of Class A Common Stock are then maintained in book-entry form) representing such non-Affiliate holder's shares of Class A Common Stock. Such exchange shall be deemed to have been made immediately prior to the close of business on the date of such request and certification, and the person or persons entitled to receive the shares of Class A Common Stock issuable upon such exchange shall be treated for all purposes as the record holder or holders of such shares of Class A Common Stock as of such date. Each share of Class B Common Stock that is exchanged pursuant to this section shall be retired and canceled by the Corporation and shall not be available for reissuance.

FIFTH: Subject to any additional vote required by this Amended and Restated Certificate of Incorporation or Bylaws, 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.

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: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Tenth shall not (a) adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification or (b) increase the liability of any director of the Corporation with respect to any acts or omissions of such director, officer or agent occurring prior to, such amendment, repeal or modification.

ELEVENTH: 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 (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) 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 (i) and (ii) 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 Eleventh will only be prospective and will not affect the rights under this Article Eleventh 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 holders of at least a majority of the shares of Series A Preferred Stock the outstanding, will be required to amend or repeal, or to adopt any provisions inconsistent with this Article Eleventh.

TWELFTH: 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 Twelfth 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 Twelfth (including, without limitation, each portion of any sentence of this Article Twelfth 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.

* * *

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 Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

[- *Remainder of this page intentionally left blank* -]

IN WITNESS WHEREOF, this Fourth Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 21st day of December , 2020.

By: /s/ Benjamin J. Zeskind
Benjamin J. Zeskind
Chief Executive Officer

[Signature Page to Fourth Amended and Restated Certificate of Incorporation]

Exhibit 3.2

Execution Version

THIRD AMENDED AND RESTATED BY-LAWS

OF

IMMUNEERING CORPORATION

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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 "Board"), the Chairman of the

Board, the Chief Executive Officer or the President or, if not so designated, at the principal office of Immuneering Corporation (the "Corporation"). The Board 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 as the same exists or may hereafter be amended (the "DGCL").

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, 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). Directors shall be nominated and elected at the annual meeting in accordance with Section 2.2.

1.3 Special Meetings. Special meetings of stockholders for any purpose or purposes may be called at any time by only the Board, the Chairman of the Board, the Chief Executive Officer, or the President and shall be called by the Secretary at the request in writing of holders of record of a majority of the outstanding capital stock of the Corporation entitled to vote. Special meetings of stockholders may not be called by any other person or persons. The Board 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 fifteen (15) nor more than sixty (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 DGCL) 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 DGCL.

1.5 Voting List. The Secretary shall prepare, at least fifteen (15) 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 fifteen (15) 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 By-laws, 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 the Board 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 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 to 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 By-laws 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 thirty (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 (1) 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 DGCL 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 (3) 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 (2) 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 By-laws. 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, 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 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, 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 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 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. 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, 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 other provisions hereof, the number of directors of the Corporation shall be at least one (1) or such greater number as the stockholders or the Board may determine from time to time.

2.3 Chairman of the Board; Vice Chairman of the Board. The Board 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 appoints a Chairman of the Board, such Chairman shall perform such duties and possess such powers as are assigned by the Board 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 By-laws. If the Board appoints a Vice Chairman of the Board, such Vice Chairman shall perform such duties and possess such powers as are assigned by the Board. Unless otherwise provided by the Board, 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.

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. At all meetings of the Board, a majority of the entire Board shall constitute a quorum for the transaction of business. If at any meeting of the Board 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 duly held at which a quorum is present shall be regarded as the act of the Board, unless a greater number is required by law or by the Certificate of Incorporation.

2.7 Removal. Except as otherwise provided by the DGCL, any one (1) 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. Except as otherwise provided in the Certificate of Incorporation or these By-laws, unless and until filled by the stockholders, any vacancy or newly-created directorship on the Board, however occurring, may be filled by vote of a majority of the remaining directors then in office, although less than a quorum, or by a sole remaining director. Each 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. If there are no directors in office, then an election of directors may be held in accordance with the DGCL.

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 may be held without notice at such time and place as shall be determined from time to time by the Board; 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 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 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

(2) or more directors, or by one (1) 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 twenty-four (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 forty-eight (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 seventy-two (72) hours in advance of the meeting. A notice or waiver of notice of a meeting of the Board need not specify the purposes of the meeting.

2.13 Meetings by Conference Communications Equipment. Directors may participate in meetings of the Board 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 or of any committee thereof may be taken without a meeting, if all members of the Board 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 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 may designate one (1) or more committees, each committee to consist of one (1) or more of the directors of the Corporation with such lawfully delegable powers and duties as the Board thereby confers, to serve at the pleasure of the Board. The Board may designate one (1) 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 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 and subject to the provisions of law, shall have and may exercise all the powers and authority of the Board 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 may from time to time request. Except as the Board 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 By-laws for the Board. Except as otherwise provided in the Certificate of Incorporation, these By-laws, or the resolution of the Board designating the committee, a committee may create one (1) 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 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. Members of special or standing committees may be allowed like compensation for attending committee meetings.

2.17 Rules, Regulations and Procedures. The Board may adopt by resolution such rules, regulations and procedures not inconsistent with the DGCL, the Certificate of Incorporation or these By-laws for the conduct of its meetings and management of the affairs of the Corporation as it shall deem appropriate.

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 shall determine, including one (1) or more Vice Presidents, Assistant Treasurers and Assistant Secretaries. The Board 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 at its first meeting following the annual meeting of stockholders. Other officers may be appointed by the Board at such meeting or at any other meeting.

3.3 Qualification. No officer need be a stockholder. Any two (2) 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 By-laws, 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 sawn 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 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 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 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, 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. The President shall perform such other duties and shall have such other powers as the Board 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) 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 or the Chief Executive Officer may from time to time prescribe. The Board may assign to any Vice President the title of Executive Vice President Senior Vice President or any other title selected by the Board.

3.9 Secretary and Assistant Secretaries. The Secretary shall perform such duties and shall have such powers as the Board 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, to attend all meetings of stockholders and the Board 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, 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) 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 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 By-laws, to disburse such funds as ordered by the Board, to make proper accounts of such funds, and to render as required by the Board 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, 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) 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.

3.12 Delegation of Authority. The Board 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 in such manner, for such lawful consideration and on such terms as the Board may determine.

4.2 Stock Certificates; Uncertificated Shares. The shares of the Corporation shall be represented by certificates, provided that the Board 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, 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 DGCL.

Each certificate for shares of stock which are subject to any restriction on transfer pursuant to the Certificate of Incorporation, these By-laws, 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 (1) 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 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 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 2.18(a) of the DGCL or, with respect to Section 151 of the DGCL, 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 or rights.

4.3 Transfers.

(a) Shares of stock of the Corporation shall be transferable in the manner prescribed by law and in these By-laws. Each stockholder is permitted to transfer its shares of stock of the Corporation provided that such stockholder complies with the terms of its restricted stock agreement if applicable. 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 (each, an “Approved Transfer Agent”). The Board shall (i) update the books of the Corporation to reflect transfer of shares of stock of the Corporation made in compliance with the applicable law and the terms of these By-laws and any applicable restricted stock agreement and (ii) designate at least one Approved Transfer Agent and provide the stockholders with the identity and contact information for such Approved Transfer Agent. 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 Approved Transfer Agent may reasonably require. Except as may be otherwise required by law, by the Certificate of Incorporation or by these By-laws, 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 By-laws.

(b) Before any proposed sale, pledge or transfer of shares of stock of the Corporation, unless there is in effect a registration statement covering the proposed transaction under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (the "Securities Act"), the holder of such shares of stock shall give notice to the Company of such Holder's intention to effect such sale, pledge or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act, (ii) a "no action" letter from the Securities and Exchange Commission (the "SEC") to the effect that the proposed sale, pledge or transfer of such shares of stock of the Corporation without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto or (iii) any other evidence reasonably satisfactory to counsel of the Corporation to the effect that the proposed sale, pledge or transfer of shares of stock of the Corporation may be effected without registration under the Securities Act, whereupon the stockholder of such shares of stock of the Corporation shall be entitled to sell, pledge or transfer such shares in accordance with the terms of the notice given by such stockholder to the Corporation. The Corporation will not require such a legal opinion or "no action" letter (x) in any transaction in compliance with SEC Rule 144 or (y) in any transaction in which such Holder distributes shares of stock of the Corporation to an affiliate of such stockholder for no consideration. Each certificate, instrument or book entry representing the shares of stock of the Corporation transferred as above provided shall be notated with, except if such transfer is made pursuant to SEC Rule 144, the following restrictive legends (except that such certificate, instrument or book entry shall not be notated with such legend if, in the opinion of counsel for such stockholder and the Corporation, such legend is not required in order to establish compliance with any provisions of the Securities Act or if, in the case of the second restrictive legend listed below, such legend is inapplicable):

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933.

SUCH SHARES MAY NOT BE SOLD, PLEDGED OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF A RESTRICTED STOCK AGREEMENT, AS AMENDED FROM

TIME TO TIME, BY AND BETWEEN THE REGISTERED OWNER OF THIS CERTIFICATE AND THE CORPORATION AND MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF SUCH RESTRICTED STOCK AGREEMENT. THE CORPORATION WILL FURNISH A COPY OF SUCH RESTRICTED STOCK AGREEMENT TO THE HOLDER HEREOF WITHOUT CHARGE UPON WRITTEN REQUEST.

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 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 may require for the protection of the Corporation or any transfer agent or registrar.

4.5 Record Date. The Board 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 sixty (60) nor less than fifteen (15) days before the date of such meeting, nor more than fifteen (15) days after the date of adoption of a record date for a consent without a meeting, nor more than sixty (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 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 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 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 may establish

ARTICLE V

GENERAL PROVISIONS

5.1 Fiscal Year. Except as from time to time otherwise designated by the Board, 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.

5.3 Waiver of Notice. Whenever notice is required to be given by law, by the Certificate of Incorporation or by these By-laws, 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 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 By-laws 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 By-laws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these By-laws.

5.8 Pronouns. All pronouns used in these By-laws 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. Subject to any other consent or approval required under the Certificate of Incorporation, these By-laws may be altered, amended or repealed, in whole or in part, or new by-laws may be adopted by the Board.

6.2 By the Stockholders. Notwithstanding Section 6.1 of these By-laws, these Bylaws may be altered, amended or repealed, in whole or in part, or new by-laws may be adopted as provided in the Certificate of Incorporation.

Exhibit 10.1

Execution Version

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT (this "**Agreement**"), is made as of the 21st day of December, 2020, by and among Immuneering Corporation, a Delaware corporation (the "**Company**"), and each of the investors listed on Schedule A hereto, each of which is referred to in this Agreement as an "**Investor**" and any Additional Purchaser (as defined in the Purchase Agreement) that becomes a party to this Agreement in accordance with Section 6.9 hereof.

RECITALS

WHEREAS, certain of the Investors (the "**Existing Investors**") hold shares of the Company's Series A Preferred Stock, par value $0.001 per share ("**Series A Preferred Stock**") and/or shares of Common Stock issued upon conversion thereof and possess registration rights, information rights, rights of first offer and other rights pursuant to that certain Investors' Rights Agreement dated as of September 20, 2020, by and among the Company and such Existing Investors (the "Prior Agreement");

WHEREAS, the Existing Investors are holders of a majority of the Registrable Securities of the Company (as defined in the Prior Agreement), and desire to amend and restate the Prior Agreement in its entirety and to accept the rights created pursuant to this Agreement in lieu of the rights granted to them under the Prior Agreement; and

WHEREAS, the Company and certain of the Investors are parties to that certain Series B Preferred Stock Purchase Agreement of even date herewith by and among the Company and such Investors (the "**Purchase Agreement**"), under which certain of the Company's and such Investors' obligations are conditioned upon the execution and delivery of this Agreement by such Investors, Existing Investors holding a majority of the Registrable Securities (as defined in the Prior Agreement) and the Company.

1. **NOW, THEREFORE**, in consideration of the foregoing, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and the Investors, including the Existing Investors, each hereby agree that the Prior Agreement shall be amended and restated in its entirety as set forth herein, and the parties to this Agreement, intending to be legally bound, hereby further agree as follows:Definitions. For purposes of this Agreement:

1.1 "**Affiliate**" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including without limitation any general partner, managing member, officer, director or trustee of such Person, or any venture capital fund, other investment fund or registered investment company now or hereafter existing that is controlled by one or more general partners, managing members or investment adviser of, or shares the same management company or investment adviser with, such Person.

1.2 "**BlackRock**" means BlackRock Health Sciences Trust II.

1.3 "**Board of Directors**" means the board of directors of the Company.

1.4 "**Boxcar**" means Boxcar PMJ, LLC.

1.5 "**Certificate of Incorporation**" means the Company's Third Amended and Restated Certificate of Incorporation, as amended and/or restated from time to time.

1.6 "**Common Stock**" means shares of the Company's common stock, par value $0.001 per share.

1.7 "**Competitor**" means a Person engaged, directly or indirectly (including through any partnership, limited liability company, corporation, joint venture or similar arrangement (whether now existing or formed hereafter)), in biopharmaceutical research and development and drug discovery and development, but shall not include (i) any financial investment firm or collective investment vehicle that, together with its Affiliates, holds less than twenty percent (25)% of the outstanding equity of any Competitor, (ii) Boxcar or any of its Affiliates, (iii) Cormorant or any of its Affiliates, (iv) Surveyor or any of its Affiliates, (v) Rock Springs or any of its Affiliates, (vi) BlackRock or any of its Affiliates, (vii) T. Rowe Price or any of its Affiliates, (viii) LYFE Capital or any of its Affiliates or (ix) Perceptive or any of its Affiliates.

1.8 "**Cormorant**" means, collectively, Cormorant Private Healthcare Fund III, LP, Cormorant Global Healthcare Master Fund, LP and CRMA SPV, LP.

1.9 "**Damages**" means any loss, damage, claim or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

1.10 "**Derivative Securities**" means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly)**,** Common Stock, including options and warrants.

1.11 "**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.12 "**Excluded Registration**" means (i) a registration relating to the sale or grant of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, equity incentive or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

1.13 "**FOIA Party**" means a Person that, in the reasonable determination of the Board of Directors, may be subject to, and thereby required to disclose non-public information furnished by or relating to the Company under, the Freedom of Information Act, 5 U.S.C. 552 ("**FOIA**"), any state public records access law, any state or other jurisdiction's laws similar in intent or effect to FOIA, or any other similar statutory or regulatory requirement.

1.14 "**Form S-1**" means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

1.15 "**Form S-3**" means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits forward incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.16 "**GAAP**" means generally accepted accounting principles in the United States as in effect from time to time.

1.17 "**Holder**" means any holder of Registrable Securities who is a party to this Agreement.

1.18 "**Immediate Family Member**" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including, adoptive relationships, of a natural person referred to herein.

1.19 "**Initiating Holders**" means, collectively, Holders who properly initiate a registration request under this Agreement.

1.20 "**IPO**" means the Company's first underwritten public offering of its Common Stock under the Securities Act.

1.21 "**Key Employee**" shall have the meaning set forth in the Purchase Agreement.

1.22 "**LYFE Capital**" means LYFE Capital Fund III (Phoenix), L.P.

1.23 "**Major Investor**" means any Investor that individually or together with such Investor's Affiliates, holds at least 143,022 shares of Registrable Securities (as adjusted for any stock split, stock dividend, combination, or other recapitalization or reclassification effected after the date hereof) and each Person to whom any of the rights of any such Investor are assigned pursuant to Section 6.1.

1.24 "**New Securities**" means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options, or warrants to purchase such equity securities, or securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

1.25 "**Perceptive**" means Perceptive Life Sciences Master Fund, Ltd.

1.26 "**Person**" means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.27 "**Preferred Director**" shall have the meaning set forth in the Certificate of Incorporation.

1.28 "**Preferred Stock**" means the Series A Preferred Stock and the Series B Preferred Stock.

1.29 "**Registrable Securities**" means (i) the Common Stock issuable or issued upon conversion of the Preferred Stock, excluding any Common Stock issued upon conversion of the Series B Preferred Stock pursuant to the "Special Mandatory Conversion" provisions of the Certificate of Incorporation; (ii) any Common Stock, or any Common Stock issued or issuable (directly or indirectly) upon conversion and/or exercise of any other securities of the Company, acquired by the Investors after the date hereof; and (iii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clauses (i) and (ii) above; excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Subsection 6.1, and excluding for purposes of Section 2 any shares for which registration rights have terminated pursuant to Subsection 2.13 of this Agreement.

1.30 "**Registrable Securities then outstanding**" means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

1.31 "**Restricted Securities**" means the securities of the Company required to be notated with the legend set forth in Subsection 2.12(b) hereof.

1.32 "**Rock Springs**" means, collectively, Rock Springs Capital Master Fund LP and Four Pines Master Fund LP.

1.33 "**SEC**" means the Securities and Exchange Commission.

1.34 "**SEC Rule 144**" means Rule 144 promulgated by the SEC under the Securities Act.

1.35 "**SEC Rule 145**" means Rule 145 promulgated by the SEC under the Securities Act.

1.36 "**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.37 "**Selling Expenses**" means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Subsection 2.6.

1.38 "**Series B Preferred Stock**" means shares of the Company's Series B Preferred Stock, par value $0.001 per share.

1.39 "**Surveyor**" means Citadel Multi-Strategy Equities Master Fund Ltd.

1.40 "**T. Rowe Price**" means, collectively, T. Rowe Price Health Sciences Fund, Inc., TD Mutual Funds – TD Health Sciences Fund and T. Rowe Price Health Sciences Portfolio.

2. Registration Rights. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) Form S-1 Demand. If at any time after the earlier of (i) five (5) years after the date of this Agreement or (ii) one hundred eighty (180) days after the effective date of the registration statement for the IPO, the Company receives a request from Holders of a majority of the Registrable Securities then outstanding that the Company file a Form S-1 registration statement having an anticipated aggregate offering price, net of Selling Expenses, of at least $15 million, then the Company shall (x) within ten (10) days after the date such request is given, give notice thereof (the "**Demand Notice**") to all Holders other than the Initiating Holders; and (y) as soon as practicable, and in any event within sixty (60) days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsections 2.1(c) and 2.3.

(b) Form S-3 Demand. If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least twenty percent (20%) of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least $5 million, then the Company shall (i) within ten (10) days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within forty-five (45) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsections 2.1(c) and 2.3.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Subsection 2.1 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Board of Directors it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (i) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (ii) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (iii) render the Company unable to comply with requirements under the Securities Act or Exchange Act, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than sixty (60) days after the request of the Initiating Holders is given; provided, however, that the Company may not invoke this right more than once in any twelve (12) month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such sixty (60) day period other than an Excluded Registration.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 2.1(a)(i) during the period that is sixty (60) days before the Company's good faith estimate of the date of filing of, and ending on a date that is one hundred eighty (180) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected one registration pursuant to Subsection 2.1(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Subsection 2.1 (b). The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 2.1 (b) (i) during the period that is thirty (30) days before the Company's good faith estimate of the date of filing of, and ending on a date that is ninety (90) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected two registrations pursuant to Subsection 2.1 (b) within the twelve (12) month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Subsection 2.1(d) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Subsection 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Subsection 2.1(d); provided, that if such withdrawal is during a period the Company has deferred taking action pursuant to Subsection 2.1(c), then the Initiating Holders may withdraw their request for registration and such registration will not be counted as "effected" for purposes of this Subsection 2.1(d).

2.2 Company Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its Common Stock under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within twenty (20) days after such notice is given by the Company, the Company shall, subject to the provisions of Subsection 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Subsection 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Subsection 2.6.

2.3 Underwriting Requirements.

(a) If, pursuant to Subsection 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Subsection 2.1, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by the Company and shall be reasonably acceptable to a majority in interest of the Initiating Holders. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Subsection 2.4(e)) enter into an underwriting agreement in customary form with the underwriter(s) selected for such underwriting. Notwithstanding any other provision of this Subsection 2.3, if the underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; provided, however, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Subsection 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares. Notwithstanding the foregoing, in no event shall (i) the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering, or (ii) the number of Registrable Securities included in the offering be reduced below twenty-five percent (25%) of the total number of securities included in such offering, unless such offering is the IPO, in which case the selling Holders may be excluded further if the underwriters make the determination described above and no other stockholder's securities are included in such offering. For purposes of the provision in this Subsection 2.3 (b) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, stockholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty (120) days or, if earlier, until the distribution contemplated in the registration statement has been completed; provided, however, that such one hundred twenty (120) day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; provided that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

In addition, the Company shall ensure that, at all times after any registration statement covering a public offering of securities of the Company under the Securities Act shall have become effective, its insider trading policy shall provide that the Company's directors may implement a trading program under Rule 10b5-1 of the Exchange Act.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements, not to exceed $35,000, of one counsel for the selling Holders ("**Selling Holder Counsel**"), shall be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Subsection 2.1 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Subsections 2.1(a) or 2.1(b), as the case may be, then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Subsections 2.1(a) or 2.1(b). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and stockholders of each such Holder; legal counsel and accountants for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person, or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 2.8 (a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person, or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 2.8 (b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Subsections 2.8 (b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Subsection 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Subsection 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Subsection 2.8, to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Subsection 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either: (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Subsection 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Subsection 2.8 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Subsection 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Subsection 2.8 (d), when combined with the amounts paid or payable by such Holder pursuant to Subsection 2.8 (b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Subsection 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after ninety (90) days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies); (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company; and (iii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of a majority of the Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company that would allow such holder or prospective holder to include such securities in any registration unless, under the terms of such agreement, such holder or prospective holder may include such securities in any such registration only to the extent that the inclusion of such securities will not reduce the number of the Registrable Securities of the Holders that are included; provided that this limitation shall not apply to Registrable Securities acquired by any additional Investor that becomes a party to this Agreement in accordance with Subsection 6.9.

2.11 "Market Stand-off" Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the IPO (such period not to exceed one hundred eighty (180) days), (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 the IPO 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 Subsection 2.11 shall apply only to the IPO, shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement, or the transfer of any shares to any trust for the direct or indirect benefit of the Holder or the immediate family of the Holder, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value, and shall be applicable to the Holders only if all officers, directors and stockholders individually owning one percent (1%) or more of the Company's outstanding Common Stock (after giving effect to conversion into Common Stock of all outstanding Preferred Stock) are subject to the same restrictions. The underwriters in connection with such registration are intended third-party beneficiaries of this Subsection 2.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Subsection 2.11 or that are necessary to give further effect thereto. In the event that the Company or the managing underwriter waives or terminates any of the restrictions contained in this Subsection 2.11 or in a lock-up agreement with respect to the securities of any Holder, officer, director than one-percent or greater stockholder of the Company (in any such case, the "**Released Securities**"), the restrictions contained in this Subsection 2.11 and in any lock-up agreements executed by the Investors shall be waived or terminated, as applicable, to the same extent and with respect to the same percentage of securities of each Investor as the percentage of Released Securities represent with respect to the securities held by the applicable Holder, officer, director than one-percent or greater stockholder. Notwithstanding anything herein to the contrary, the provisions of this Subsection 2.11 shall not apply to transactions (including, without limitation, any swap, hedge or similar agreement or arrangement) or announcements, in each case, relating to securities acquired in the IPO or securities acquired in open market or other transactions from and after the IPO or that otherwise do not involve or relate to securities of the Company owned by a Holder prior to the IPO.

2.12 Restrictions on Transfer.

(a) The Preferred Stock and the Registrable Securities shall not be sold, pledged, or otherwise transferred, and the Company shall not recognize and shall issue stop-transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder will cause any proposed purchaser, pledgee, or transferee of Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement. Notwithstanding the foregoing, the Company shall not require any transferee of shares pursuant to an effective registration statement or, following the IPO, SEC Rule 144 to be bound by the terms of this Agreement.

(b) Each certificate, instrument, or book entry representing (i) the Preferred Stock, (ii) the Registrable Securities, and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Subsection 2.12 (c)) be notated with a legend substantially in the following form:

THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.

THE SECURITIES REPRESENTED HEREBY 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.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Subsection 2.12.

(c) The holder of such Restricted Securities, by acceptance of ownership thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge, or transfer of any Restricted Securities, unless there is in effect a registration statement under the Securities Act covering the proposed transaction or, following the IPO, the transfer is made pursuant to SEC Rule 144, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge, or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge, or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act; (ii) a "no action" letter from the SEC to the effect that the proposed sale, pledge, or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto; or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge, or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge, or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a legal opinion or "no action" letter (x) in any transaction in compliance with SEC Rule 144; (y) in any transaction in which such Holder distributes Restricted Securities to an Affiliate of such Holder for no consideration or (z) in any internal transaction in which such Holder transfers Restricted Securities to an Affiliate of such Holder that is an entity and that is ultimately controlled by the same parent company as the Holder (or is the ultimate parent company of the Holder); provided that, in the case of clauses (y) and (z), other than in connection with a transaction in compliance with SEC Rule 144 following the IPO, each transferee agrees in writing to be subject to the terms of this Subsection 2.12. Notwithstanding the foregoing, the Company shall be obligated to reissue promptly unlegended certificates or book entries at the request of any Holder thereof if the Company has completed its IPO and the Holder shall have obtained an opinion of counsel (which counsel may be counsel to the Company) to the effect that the securities proposed to be disposed of may lawfully be so disposed of without registration, qualification and legend, provided that the second legend listed above shall be removed only at such time as the Holder of such certificate is no longer subject to any restrictions hereunder. Each certificate, instrument, or book entry representing the Restricted Securities transferred as above provided shall be notated with, except if such transfer is made pursuant to SEC Rule 144 or pursuant to an effective registration statement, the appropriate restrictive legend set forth in Subsection 2.12 (b), except that such certificate instrument, or book entry shall not be notated with such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Subsections 2.1 or 2.2 shall terminate upon the earliest to occur of:

(a) Following the closing of a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation;

(b) such time after consummation of the IPO as SEC Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such Holder's shares without limitation during a three-month period without registration;

(c) the first anniversary of the IPO.

3. Information Rights.

3.1 Delivery of Financial Statements. The Company shall deliver to each Major Investor, provided that the Board of Directors has not reasonably determined that such Major Investor is a Competitor of the Company:

(a) as soon as practicable, but in any event within one hundred thirty-five (135) days after the end of each fiscal year of the Company (i) a balance sheet as of the end of such year, (ii) statements of income and of cash flows for such year, and a comparison between (x) the actual amounts as of and for such fiscal year and (y) the comparable amounts for the prior year and as included in the Budget (as defined in Subsection 3.1(e)) for such year, and (iii) a statement of stockholders' equity as of the end of such year, all such financial statements audited and certified by independent public accountants of nationally or regionally recognized standing selected by the Company;

(b) as soon as practicable, but in any event within thirty (30) days after the end of each of the first three (3) quarters of each fiscal year of the Company, unaudited statements of income and cash flows for such fiscal quarter, and a comparison between (x) the actual amounts as of and for such fiscal quarter and (y) the comparable amounts as included in the Budget (as defined in Subsection 3.1(e)) for such quarter, and an unaudited balance sheet and a statement of stockholders' equity as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments; and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(c) as soon as practicable, but in any event within thirty (30) days after the end of each quarter of each fiscal year of the Company, a statement showing the number of shares of each class and series of capital stock and securities convertible into or exercisable for shares of capital stock outstanding at the end of the period, the Common Stock issuable upon conversion or exercise of any outstanding securities convertible or exercisable for Common Stock and the exchange ratio or exercise price applicable thereto, and the number of shares of issued stock options and stock options not yet issued but reserved for issuance, if any, all in sufficient detail as to permit the Major Investors to calculate their respective percentage equity ownership in the Company, and certified by the chief financial officer or chief executive officer of the Company as being true, complete, and correct; provided, however, that no delivery needs to be made under this Section 3.1(c) for as long as the Major Investor has access to the Company's capitalization table on Carta or another similar electronic capitalization table management platform that shows the information set forth in this Section 3.1(c);

(d) as soon as practicable, but in any event within thirty (30) days of the end of each month, an unaudited income statement and statement of cash flows for such month, and a comparison between (x) the actual amounts as of and for such month and (y) the comparable amounts as included in the Budget (as defined in Subsection 3.1(e)) for such month, and an unaudited balance sheet and statement of stockholders' equity as of the end of such month, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments and (ii) not contain all notes thereto that may be required in accordance with GAAP); and

(e) as soon as practicable, but in any event thirty (30) days before the end of each fiscal year, a budget and business plan for the next fiscal year (collectively, the "**Budget**"), approved by the Board of Directors (including all of the Preferred Directors) and prepared on a monthly basis, including balance sheets, income statements, and statements of cash flow for such months and, promptly after prepared, any other budgets or revised budgets prepared by the Company; and

(f) as soon as practicable, but in any event within twenty-five (25) days after the end of each quarter of each fiscal year of the Company, such other information relating to the financial condition, business, scientific developments, prospects, and corporate affairs of the Company as any Major Investor may from time to time reasonably request; provided, however, that the Company shall not be obligated under this Subsection 3.1 to provide information (i) that the Company reasonably determines in good faith to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in a form acceptable to the Company); or (ii) the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries.

Notwithstanding anything else in this Subsection 3.1 to the contrary, the Company may cease providing the information set forth in this Subsection 3.1 during the period starting with the date forty-five (45) days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; provided that the Company's covenants under this Subsection 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

3.2 Inspection. The Company shall permit each Major Investor (provided that the Board of Directors has not reasonably determined that such Major Investor is a Competitor of the Company), at such Major Investor's expense, to visit and inspect the Company's properties; examine its books of account and records; and discuss the Company's affairs, finances, and accounts with its officers, during normal business hours of the Company as may be reasonably requested by the Major Investor; provided, however, that the Company shall not be obligated pursuant to this Subsection 3.2 to provide access to any information that it reasonably and in good faith considers to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in form acceptable to the Company) or the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

3.3 Observer Rights. As long as Surveyor owns not less than fifty percent of the shares of the Series B Preferred Stock it is purchasing under the Purchase Agreement (or an equivalent amount of Common Stock issued upon conversion thereof), the Company shall invite a representative of Surveyor to attend all meetings of the Board of Directors in a nonvoting observer capacity and, in this respect, shall give such representative copies of all notices, minutes, consents, and other materials that it provides to its directors at the same time and in the same manner as provided to such directors; provided, however, that such representative shall agree to hold in confidence all information so provided or learned in any meeting of the Board of Directors and to not use any such information for any purpose other than to monitor Surveyor's investment in the Company; and provided further, that the Company reserves the right to withhold any information and to exclude such representative from any meeting or portion thereof if access to such information or attendance at such meeting could adversely affect the attorney-client privilege between the Company and its counsel or result in disclosure of trade secrets or a conflict of interest. Notwithstanding the foregoing, Surveyor shall not exercise its rights pursuant to this Section 3.3 unless and until the Company has confirmed in writing to Surveyor at any time after the Initial Closing (as defined in the Purchase Agreement) that the Company does not engage in the design, fabrication, development, testing, production or manufacture of critical technologies within the meaning of DPA (as defined in the Purchase Agreement).

3.4 Termination of Information Rights. The covenants set forth in Subsection 3.1, Subsection 3.2 and Subsection 3.3 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon the closing of a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation, whichever event occurs first.

3.5 Confidentiality. Each Investor agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Subsection 3.5 by such Investor), (b) is or has been independently developed or conceived by such Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to such Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Subsection 3.5; (iii) to any Affiliate, partner, member, stockholder, or wholly owned subsidiary of such Investor in the ordinary course of business, provided that such Investor informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information; (iv) to the extent required in connection with any routine or periodic examination or similar process by any regulatory or self-regulatory body or authority not specifically directed at the Company or the confidential information obtained from the Company pursuant to the terms of the Agreement, including, without limitation, quarterly or annual reports or (v) as may otherwise be required by law, regulation, rule, court order or subpoena, provided that , with respect to this clause (v), such Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure.

3.6 Material Non-Public Information.

(a) The Company understands and acknowledges that in the regular course of Surveyor's businesses, Surveyor and its Affiliates will invest in companies that have issued securities that are publicly traded (each, a "**Public Company**"). Accordingly, the Company covenants and agrees that before providing any material non-public information about a Public Company ("**Public Company Information**") to Surveyor or its representatives (or any of their respective Affiliates), the Company shall provide written notice of such Public Company Information to Surveyor's compliance officer at SCComplianceAppvl@citadel.com describing such Public Company Information in reasonable detail. The Company shall not disclose Public Company Information to Surveyor or its representatives (or any of their respective Affiliates) without prior written authorization from Surveyor's compliance officer listed above.

(b) The Company acknowledges and agrees that in no event shall any Investor's confidentiality and non-use obligations hereunder in any manner be deemed or construed as limiting such Investor or its representatives (or any of their respective Affiliates) ability to trade any security of a Public Company.

4. Rights to Future Stock Issuances.

4.1 Right of First Offer. Subject to the terms and conditions of this Subsection 4.1 and applicable securities laws, if the Company proposes to offer or sell any New Securities, the Company shall first offer such New Securities to each Major Investor. A Major Investor shall be entitled to apportion the right of first offer hereby granted to it in such proportions as it deems appropriate, among (i) itself, (ii) its Affiliates and (iii) its beneficial interest holders, such as limited partners, members or any other Person having "beneficial ownership," as such term is defined in Rule 13d-3 promulgated under the Exchange Act, of such Major Investor ("**Investor Beneficial Owners**"); provided that each such Affiliate or Investor Beneficial Owner (x) is not a Competitor or FOIA Party, unless such party's purchase of New Securities is otherwise consented to by the Board of Directors and (y) agrees to enter into this Agreement and each of the Voting Agreement and Right of First Refusal and Co-Sale Agreement of even date herewith among the Company, the Investors and the other parties named therein, as an "**Investor**" under each such agreement (provided that any Competitor or FOIA Party shall not be entitled to any rights as a Major Investor under Subsections 3.1, 3.2 and 4.1 hereof).

(a) The Company shall give notice (the "**Offer Notice**") to each Major Investor, stating (i) its bona fide intention to offer such New Securities, (ii) the number of such New Securities to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such New Securities.

(b) By notification to the Company within twenty (20) days after the Offer Notice is given, each Major Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to that portion of such New Securities which equals the proportion that the Common Stock then held by such Major Investor (including all shares of Common Stock then issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held by such Major Investor) bears to the total Common Stock of the Company then outstanding (assuming full conversion and/or exercise, as applicable, of all Preferred Stock and any other Derivative Securities then outstanding). At the expiration of such twenty (20) day period, the Company shall promptly notify each Major Investor that elects to purchase or acquire all the shares available to it (each, a "**Fully Exercising Investor**") of any other Major Investor's failure to do likewise. During the ten (10) day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, up to that portion of the New Securities for which Major Investors were entitled to subscribe but that were not subscribed for by the Major Investors which is equal to the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of Preferred Stock and any other Derivative Securities then held, by such Fully Exercising Investor bears to the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by all Fully Exercising Investors who wish to purchase such unsubscribed shares. The closing of any sale pursuant to this Subsection 4.1(b) shall occur within the later of one hundred and twenty (120) days of the date that the Offer Notice is given and the date of initial sale of New Securities pursuant to Subsection 4.1(c).

(c) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Subsection 4.1(b), the Company may, during the ninety (90) day period following the expiration of the periods provided in Subsection 4.1(b), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within thirty (30) days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Major Investors in accordance with this Subsection 4.1.

(d) The right of first offer in this Subsection 4.1 shall not be applicable to (i) Exempted Securities (as defined in the Certificate of Incorporation); (ii) shares of Common Stock issued in the IPO; and (iii) the issuance of shares of Series B Preferred Stock pursuant to Subsection 1.3 of the Purchase Agreement.

4.2 Termination. The covenants set forth in Subsection 4.1 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon the closing of a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation, whichever event occurs first.

5. Additional Covenants.

5.1 Insurance. The Company has obtained from financially sound and reputable insurers Directors and Officers liability insurance in an amount and on terms and conditions satisfactory to the Board of Directors, including all of the Preferred Directors, and will use commercially reasonable efforts to cause such insurance policies to be maintained until such time as the Board of Directors determines that such insurance should be discontinued. The Company shall obtain, within thirty (30) days of the date hereof, from financially sound and reputable insurers term “key-person” insurance on Benjamin J. Zeskind, in an amount of five million dollars ($5,000,000) or any other amount satisfactory to the Board of Directors and on terms and conditions satisfactory to the Board of Directors, and will use commercially reasonable efforts to cause such insurance policies to be maintained until such time as the Board of Directors determines that such insurance should be discontinued. The key-person policy shall name the Company as loss payee, and neither policy shall be cancelable by the Company without prior approval by the Board of Directors, including all of the Preferred Directors.

5.2 Employee Agreements. The Company will cause (i) each Person now or hereafter employed by it or by any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) with access to confidential information and/or trade secrets to enter into a nondisclosure and proprietary rights assignment agreement; and (ii) each Key Employee to enter into a one (1) year noncompetition and nonsolicitation agreement, substantially in the form approved by the Board of Directors. The Company has delivered to the Investors copies of all existing agreements between current employees and consultants, and the Investors agree that these agreements satisfy the requirements of this Section 5.2. In addition, the Company shall not amend, modify, terminate, waive, or otherwise alter, in whole or in part, any of the above-referenced agreements or any restricted stock agreement between the Company and any employee, without the approval of the Board of Directors, including all of the Preferred Directors.

5.3 Employee Stock. Unless otherwise approved by the Board of Directors, including all of the Preferred Directors, all future employees and consultants of the Company who purchase, receive options to purchase, or receive awards of shares of the Company's capital stock after the date hereof shall be required to execute restricted stock or option agreements, as applicable, providing for (i) vesting of shares over a four (4) year period, with the first twenty-five percent (25%) of such shares vesting following twelve (12) months of continued employment or service, and the remaining shares vesting in equal monthly installments over the following thirty-six (36) months, and (ii) a market stand-off provision substantially similar to that in Subsection 2.11.

5.4 Matters Requiring Investor Director Approval. So long as the holders of Series B Preferred Stock are entitled to elect a Preferred Director, the Company hereby covenants and agrees with each of the Investors that it shall not, without approval of the Board of Directors, which approval must include the affirmative vote of all of the Preferred Directors:

(a) Effect or consummate a public offering of any Capital Stock of the company or any of its subsidiaries, or engage any investment banking firm or underwriter in connection therewith;

(b) make, or permit any subsidiary to make, any loan or advance to, or own any stock or other securities of, any subsidiary or other corporation, partnership, or other entity unless it is wholly owned by the Company;

(c) make, or permit any subsidiary to make, any loan or advance to any Person, including, without limitation, any employee or director of the Company or any subsidiary, except advances and similar expenditures in the ordinary course of business or under the terms of an employee stock or option plan approved by the Board of Directors;

(d) guarantee, directly or indirectly, or permit any subsidiary to guarantee, directly or indirectly, any indebtedness except for trade accounts of the Company or any subsidiary arising in the ordinary course of business;

(e) make any investment inconsistent with any investment policy approved by the Board of Directors;

(f) incur any aggregate indebtedness in excess of $250,000 that is not already included in a budget approved by the Board of Directors, other than trade credit incurred in the ordinary course of business;

(g) make any capital expenditures (including expenditures under capitalized leases) that in the aggregate are more than 10% in excess of the annual budget approved by the Board;;

(h) otherwise enter into or be a party to any transaction with any director, officer, or employee of the Company or any "associate" (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such Person, except transactions made in the ordinary course of business, pursuant to reasonable requirements of the Company's business and upon fair and reasonable terms that are approved by the Board of Directors;

(i) hire, terminate, or change the compensation of the executive officers, including approving any option grants or stock awards to executive officers;

(j) change the principal business of the Company, enter unrelated lines of business, or exit the current line of business;

(k) sell, assign, license, pledge, or encumber material technology or intellectual property, other than the sale of products, services or licenses granted in the ordinary course of business;

(l) enter into any corporate strategic relationship involving the payment, contribution, or assignment by the Company or to the Company of money or assets greater than $200,000, other than agreements for the provision of the Company's services entered into in the ordinary course of business;

(m) increase or decrease the size of the Board of Directors;

(n) increase or decrease the amount of the Directors and Officers liability insurance;

(o) amend, modify, terminate, waive, or otherwise alter, in whole or in part, the election procedure of the Board of Directors;

(p) adopt any plan, or any amendment of any plan, for issuance of any capital stock to employees, directors and consultants; or

(q) approve the Budget or adopt any material changes or increases cumulatively greater than 15%.

5.5 Board Matters. Unless otherwise determined by the vote of a majority of the directors then in office, the Board of Directors shall meet at least quarterly in accordance with an agreed-upon schedule. Each Preferred Director shall be entitled in such person's discretion to be a member of any committee of the Board of Directors.

5.6 Successor Indemnification. If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provisions shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board of Directors as in effect immediately before such transaction, whether such obligations are contained in the Company's Bylaws, the Certificate of Incorporation, or elsewhere, as the case may be.

5.7 Indemnification Matters. The Company hereby acknowledges that one (1) or more of the Preferred Directors nominated to serve on the Board of Directors by one (1) or more Investors may have certain rights to indemnification, advancement of expenses and/or insurance provided by one (1) or more of the Investors and certain of their Affiliates (collectively, the "**Investor Indemnitors**"). The Company hereby agrees (a) that it is the indemnitor of first resort (*i.e.*, its obligations to any such Preferred Director are primary and any obligation of the Investor Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by such Preferred Director are secondary), (b) that it shall be required to advance the full amount of expenses incurred by such Preferred Director and shall be liable for the full amount of all expenses, judgments, penalties, fines and amounts paid in settlement by or on behalf of any such Preferred Director to the extent legally permitted and as required by the Certificate of Incorporation or Bylaws of the Company (or any agreement between the Company and such Preferred Director), without regard to any rights such Preferred Director may have against the Investor Indemnitors, and, (c) that it irrevocably waives, relinquishes and releases the Investor Indemnitors from any and all claims against the Investor Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Investor Indemnitors on behalf of any such Preferred Director with respect to any claim for which such Preferred Director has sought indemnification from the Company shall affect the foregoing and the Investor Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Preferred Director against the Company. The Preferred Directors and the Investor Indemnitors are intended third-party beneficiaries of this Section 5.7 and shall have the right, power and authority to enforce the provisions of this Section 5.7 as though they were a party to this Agreement.

5.8 Right to Conduct Activities. The Company hereby agrees and acknowledges that (i) Boxcar or any of its Affiliates, (ii) Cormorant or any of its Affiliates, (iii) Surveyor or any of its Affiliates, (iv) Rock Springs or any of its Affiliates, (vi) BlackRock or any of its Affiliates, (v) T. Rowe Price or any of its Affiliates, (vii) LYFE Capital or any of its Affiliates or (viii) Perceptive or any of its Affiliates (collectively, the "**Professional Investment Organizations**") are professional investment organizations, and as such review the business plans and related proprietary information of many enterprises, some of which may compete directly or indirectly with the Company's business (as currently conducted or as currently propose to be conducted). The Company hereby agrees that, to the extent permitted under applicable law, the Professional Investment Organizations shall not be liable to the Company for any claim arising out of, or based upon, (i) the investment by the Professional Investment Organizations in any entity competitive with the Company, or (ii) actions taken by any partner, officer, employee or other representative of the Professional Investment Organizations to assist any such competitive company, whether or not such action was taken as a member of the board of directors of such competitive company or otherwise, and whether or not such action has a detrimental effect on the Company; provided, however, that the foregoing shall not relieve (x) any of the Investors from liability associated with the unauthorized disclosure of the Company's confidential information obtained pursuant to this Agreement, or (y) any director or officer of the Company from any liability associated with his or her fiduciary duties to the Company.

5.9 Defense Production Act. To the extent that the Company learns that it engages in the design, fabrication, development, testing, production or manufacture of critical technologies within the meaning of Section 721 of the Defense Production Act of 1950, as amended (50 U.S.C. § 4565), and all rules and regulations thereunder, including as codified at 31 C.F.R. Part 800, whether because of a new categorization of technology by the U.S. government or otherwise, the Company shall promptly provide notice to Surveyor.

5.10 Class B Common Stock. The Company shall not cause any shares of Class B Common Stock to become subject to the periodic reporting requirements of Section 12(b) or 12(g) of the Exchange Act without the prior written consent of Surveyor.

5.11 Termination of Covenants. The covenants set forth in this Section 5, except for Subsections 5.6 and 5.7, shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation, whichever event occurs first.

6. Miscellaneous.

6.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations) by a Holder to a transferee of Registrable Securities that (i) is an Affiliate of a Holder; (ii) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or one or more of such Holder's Immediate Family Members; or (iii) after such transfer, holds at least 143,022 shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations) or, if less, all of the Registrable Securities held by such Holder; provided, however, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred; and (y) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Subsection 2.11. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee (1) that is an Affiliate or stockholder of a Holder; (2) who is a Holder's Immediate Family Member; or (3) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member shall be aggregated together and with those of the transferring Holder; provided further that all transferees who would not qualify individually for assignment of rights shall, as a condition to the applicable transfer, establish a single attorney-in-fact for the purpose of exercising any rights, receiving notices, or taking any action under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

6.2 Governing Law. This Agreement and any controversy arising out of or relating to this Agreement shall be governed by and construed in accordance with the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts, without regard to conflict of law principles that would result in the application of any law other than the law of the Commonwealth of Massachusetts.

6.3 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *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**.**

6.4 Titles and Subtitles. The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

6.5 Notices.

(a) All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or (i) personal delivery to the party to be notified; (ii) when sent, if sent by electronic mail or facsimile during the recipient's normal business hours, and if not sent during normal business hours, then on the recipient's next business day; (iii) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one (1) business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth on Schedule A hereto, or to the principal office of the Company and to the attention of the Chief Executive Officer, in the case of the Company, or to such email address, facsimile number, or address as subsequently modified by written notice given in accordance with this Subsection 6.5. If notice is given to the Company, a copy shall also be sent to Latham & Watkins LLP, 200 Clarendon Street, 27th Floor, Boston, MA 02116, Attention: Evan G. Smith, Esq. and if notice is given to Investors, a copy shall also be given to: (x) Greenberg Traurig, LLP, One International Place Suite 2000, Boston, MA 02110, Attention Bradley A. Jacobson, Esq., and (y) Wiggin and Dana LLP, One Century Tower, 265 Church Street, New Haven, Connecticut 06510, Attention Evan S. Kipperman, Esq.

(b) Consent to Electronic Notice. Each Investor and Key Holder consents to the delivery of any stockholder notice pursuant to the Delaware General Corporation Law (the "DGCL"), as amended or superseded from time to time, by electronic transmission pursuant to Section 232 of the DGCL (or any successor thereto) at the electronic mail address as on the books of the Company. Each Investor agrees to promptly notify the Company of any change in such stockholder's electronic mail address, and that failure to do so shall not affect the foregoing.

6.6 Amendments and Waivers. Any term of this Agreement may be amended, modified or terminated and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of the Company and the holders of a majority of the Registrable Securities then outstanding; provided that the Company may in its sole discretion waive compliance with Subsection 2.12(c) (and the Company's failure to object promptly in writing after notification of a proposed assignment allegedly in violation of Subsection 2.12(c) shall be deemed to be a waiver); and provided further that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party. Notwithstanding the foregoing, (a) this Agreement may not be amended, modified or terminated and the observance of any term hereof (including, without limitation, Sections 1.6, 1.7 and 5.4) may not be waived with respect to any Investor without the written consent of such Investor, unless such amendment, modification, termination, or waiver applies to all Investors in the same fashion (it being agreed that a waiver of the provisions of Section 4 with respect to a particular transaction shall be deemed to apply to all Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Investors may nonetheless, by agreement with the Company, purchase securities in such transaction; provided that if the rights of a Major Investor under Section 4.1 with respect to an offering of New Securities are waived without the consent of such Major Investor, and any Major Investor actually purchases any New Securities in any such offering, then each Major Investor who did not consent to such waiver shall be permitted to participate in such offering on a pro rata basis (based on the level of participation of the Major Investor purchasing the largest portion of such Major Investor's pro rata share) (b) Sections 1.35, 3.3, 5.9, 5.10 and this clause (b) of this Subsection 6.6 may not be amended, modified, terminated or waived without the written consent of Surveyor; and (c) Subsections 3.1 and 3.2, Section 4 and any other section of this Agreement applicable to the Major Investors (including this clause (c) of this Subsection 6.6) may not be amended, modified, terminated or waived without the written consent of the holders of a majority of the Registrable Securities then outstanding and held by the Major Investors. Notwithstanding the foregoing, Schedule A hereto may be amended by the Company from time to time to add transferees of any Registrable Securities in compliance with the terms of this Agreement without the consent of the other parties; and Schedule A hereto may also be amended by the Company after the date of this Agreement without the consent of the other parties to add information regarding any additional Investor who becomes a party to this Agreement in accordance with Subsection 6.9. The Company shall give prompt notice of any amendment, modification or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, modification, termination, or waiver. Any amendment, modification, termination, or waiver effected in accordance with this Subsection 6.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision.

6.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

6.8 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliated persons may apportion such rights as among themselves in any manner they deem appropriate.

6.9 Additional Investors. Notwithstanding anything to the contrary contained herein, if the Company issues additional shares of the Company's Preferred Stock after the date hereof, any purchaser of such shares of Preferred Stock may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement, and thereafter shall be deemed an "Investor" for all purposes hereunder. No action or consent by the Investors shall be required for such joinder to this Agreement by such additional Investor, so long as such additional Investor has agreed in writing to be bound by all of the obligations as an "Investor" hereunder.

6.10 Entire Agreement. This Agreement (including any Schedules and Exhibits hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly canceled.

6.11 Dispute Resolution. The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of Delaware and to the jurisdiction of the United States District Court for the District of Delaware for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of Delaware or the United States District Court for the District of Delaware, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court.

6.12 WAIVER OF JURY TRIAL. EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT OR THE SUBJECT MATTER HEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS AGREEMENT, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

6.13 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

IMMUNEERING CORPORATION

By: /s/ Benjamin J. Zeskind
Name: Benjamin J. Zeskind
Title: Chief Executive Officer

INVESTOR:

CORMORANT PRIVATE HEALTHCARE FUND III, LP

By: Cormorant Private Healthcare GP III, LLC

By: /s/ Bihua Chen
Name: Bihua Chen
Title: Managing Member

CORMORANT GLOBAL HEALTHCARE MASTER FUND, LP

By: Cormorant Global Healthcare GP, LLC

By: /s/ Bihua Chen
Name: Bihua Chen
Title: Managing Member

CRMA SPV, L.P.

By: Cormorant Asset Management, LP

By: /s/ Bihua Chen
Name: Bihua Chen
Title: Attorney-in-fact

INVESTORS:

BLACKROCK HEALTH SCIENCES TRUST II

By: BlackRock Advisors, LLC, its Investment Adviser

By: /s/ Hongying Erin Xie
Name: Hongying Erin Xie
Title: Managing Director

INVESTORS:

BOXCAR PMJ, LLC

By: /s/ Joseph Kekst
Name: Joseph Kekst
Title: Manager

PEF LLC

By: /s/ Peter Feinberg
Name:
Title:

PF ASSOCIATES L.P.

By: /s/ Peter Feinberg
Name:
Title:

S4K INVESTMENTS LLC

By: /s/ Peter Feinberg
Name:
Title:

INVESTORS:

SAGE CREST LLC

By: /s/ Joseph Kekst
Name: Joseph Kekst
Title: Manager

TSKEK IM LLC

By: /s/ Joseph Kekst
Name: Joseph Kekst
Title: Manager

ZBC CAPITAL PARTNERS LLC

By: /s/ Marc Hurwitz
Name: Marc Hurwitz
Title: President

INVESTOR:

VALUEQUEST PARTNERS, LLC

By: _____
Name: _____
Title: _____

INVESTOR:

/s/ Robert J. Carpenter
Robert J. Carpenter

INVESTOR:

/s/ Benjamin J. Zeskind
Benjamin J. Zeskind

INVESTOR:

MERRIN INVESTORS LLC

By: /s/ Seth Merrin
Name: Seth Merrin
Title: General Partner

INVESTOR:

/s/ Martin Lipton
Martin Lipton

INVESTOR:

/s/ Harold Levy
Harold Levy

INVESTOR:

/s/ Brett M. Hall
Brett M. Hall

INVESTOR:

/s/ Howard Kaufman
Howard Kaufman

INVESTOR:

/s/ Joseph Shenker
Joseph Shenker

INVESTOR:

ELI PINEWSKI FAMILY LLC

By: /s/ Alan Pines
Name: Alan Pines
Title: Member

INVESTOR:

/s/ Kenneth Gruber
Kenneth Gruber

INVESTOR:

CITADEL MULTI-STRATEGY EQUITIES MASTER FUND LTD.

By: Citadel Advisors LLC, its portfolio manager

By: /s/ Shellane Mulcahy
Name:
Title: Authorized Signatory

INVESTOR:

ROCK SPRINGS CAPITAL MASTER FUND LP

By: Rock Springs General Partner LLC, its general partner

By: /s/ Kris Jenner
Name: Kris Jenner
Title: Member

FOUR PINES MASTER FUND LP

By: Four Pines General Partner LLC, its general partner

By: /s/ Kris Jenner
Name: Kris Jenner
Title: Member

INVESTOR:

T. ROWE PRICE HEALTH SCIENCES FUND, INC.
TD MUTUAL FUNDS - TD HEALTH SCIENCES FUND
T. ROWE PRICE HEALTH SCIENCES PORTFOLIO
Each account, severally and not jointly

By: T. Rowe Price Associates, Inc., Investment Adviser or Subadviser, as applicable

By: /s/ Andrew Baek
Name: Andrew Baek
Title: Vice President

INVESTOR:

LYFE CAPITAL FUND III (PHOENIX), L.P.

By: /s/ Yao Li Ho
Name: Yao Li Ho
Title: Member of the General Partner

INVESTOR:

PERCEPTIVE LIFE SCIENCES MASTER FUND, LTD.

By: /s/ James H. Mannix
Name: James H. Mannix
Title: Chief Operating Officer

INVESTOR:

BM LINDSEY, INC.

By: /s/ Bryan Murphy
Name: Bryan Murphy
Title: Director

INVESTOR:

FEINBERG INVESTMENT TRUST LLC

By: /s/ Lori Kany
Name:
Title:

INVESTOR:

BRIDGELINKS LLC

By: /s/ Peter Langerman
Name: Peter Langerman
Title: President

INVESTOR:

/s/ Rebecca Kusko
Rebecca Kusko

INVESTOR:

/s/ Dana Levy
Dana Levy

INVESTOR:

/s/ Jonathan Levy
Jonathan Levy

INVESTOR:

/s/ Jenna Levy

Jenna Levy

INVESTOR:

/s/ Ilonna Rimm
Ilonna Rimm

INVESTOR:

/s/ Josef von Rickenbach
Josef von Rickenbach

INVESTOR:

/s/ Benjamin Kany
Benjamin Kany

INVESTOR:

/s/ Samantha Kany

Samantha Kany

INVESTOR:

/s/ Mark Zucker
Mark Zucker

INVESTOR:

/s/ Peter King
Peter King

INVESTOR:

/s/ Scott Barrett
Scott Barrett

INVESTOR:

Investor Name:

By:

Signatory Name (if signing for an entity):

Title (if signing for an entity):

SCHEDULE A
Investors

Name and Address of Investor
Cormorant Private Healthcare Fund III, LP [Address]
Cormorant Global Healthcare Master Fund, LP [Address]
CRMA SPV, LP [Address]
Robert J. Carpenter [Address]
Martin Lipton [Address]
Josef von Rickenbach [Address]
BM Lindsey, Inc. [Address]

PEF LLC [Address]\
Tskek IM LLC [Address]
Marc A Hurwitz 2012 Dynasty Trust [Address]
Feinberg Investment Trust LLC [Address]
PF Associates L.P. [Address]
S4K Investments LLC [Address]
SAGE Crest LLC [Address]
ZBC Capital Partners LLC [Address]
Benjamin J. Zeskind [Address]

Robert J. Carpenter [Address]
Rebecca Kusko [Address]
Brett M. Hall [Address]
Merrin Investors LLC [Address]
ValueQuest Partners, LLC [Address]
Ken Gruber [Address]
Dr. Mark Zucker [Address]
Eli Pinewski Family LLC [Address]

Brent LLC [Address]
William Sahlman [Address]
Bridgelinks LLC [Address]
Harold Levy [Address]
Dana Levy [Address]
Jonathan Levy [Address]
Jenna Levy [Address]
Haya Taitel [Address]

Mike Hornbuckle [Address]
Jon Mann [Address]
PENSCO IRA account Eric Bodner [Address]
Josh & Aliza Katz [Address]
Linda Jesselson [Address]
Bruce A. Bauman and Denise D. Selden, Tenants in Common [Address]
CARRAL LLC [Address]
Premier Trust Custodian FBO David Koster IRA [Address]

Julio Triana [Address]
Rochelle Gut [Address]
Tyseth Holdings LLC [Address]
Blue River Associates, L.P. [Address]
Eric F. Saltzman Revocable Trust [Address]
Daniel Giachin [Address]
Boxcar PMJ, LLC [Address]
Adross Insights, LLC [Address]

ST Detroit Enterprises LLC [Address]
Elisa and Yoel Wagner [Address]
The Livio Giachin Family Trust [Address]
Business Technology Advisors, LLC [Address]
Benjamin Kany [Address]
Samantha Kany [Address]
Robert and Susan Okin [Address]
IRA Services Trust Company [Address]

The Kekst Family Living Trust u/a/d (David J. Kekst) [Address]
Scott Barrett [Address]
Peter King [Address]
Ilana’s Trust UT Gershon Kekst Annuity Trust [Address]
Ronald G. Weiner [Address]
55 Pine Street LLC [Address]
Kenneth Mandelbaum [Address]
ParkEcho Genetica LLC [Address]
Louis Feinberg [Address]

Joseph C. Shenker [Address]
Raizi Simons [Address]
Hali Simons [Address]
Zelda Gruber Family Trust [Address]
Pam Genet and Elliot Barsh [Address]
Ira Rosenberg [Address]
Jeremy Triana [Address]
Howard Kaufman [Address]
Marc A Hurwitz 2012 Dynasty Trust [Address]

T. Rowe Price Health Sciences Fund, Inc. [Address]
TD Mutual Funds - TD Health Sciences Fund [Address]
T. Rowe Price Health Sciences Portfolio [Address]
Citadel Multi-Strategy Equities Master Fund Ltd. [Address]
Rock Springs Capital Master Fund LP [Address]

Four Pines Master Fund LP [Address]
Blackrock Health Sciences Trust II [Address]
LYFE Capital Fund III (Phoenix), L.P. [Address]
Perceptive Life Sciences Master Fund, Ltd. [Address]
Ilonna Rimm [Address]

(1) BioArkive, LLC

- and -

(2) Immuneering Corporation

MASTER SERVICES AGREEMENT

MASTER SERVICES AGREEMENT

This Master Services Agreement ("**Agreement**"), effective as of August 5th, 2019 ("**Effective Date**"), is made by and between Bioarkive LLC, a limited liability company under the laws of California, USA, having its registered offices and principal place of business at 11421 W Bernardo Court (Suite 200), San Diego, CA 92127 (hereinafter referred to as "**Bioarkive**"); and Immuneering Corporation, a corporation**,** incorporated under the laws of Delaware, USA, having its registered offices and principal place of business at 245 Main St, Second Floor, Cambridge, MA 02142 (hereinafter referred to as "**Client**").

Hereinafter each party may also individually be referred to as a "**Party**" and collectively as the "**Parties**".

WHEREAS, Client is engaged in the field of drug discovery;

WHEREAS, Bioarkive is engaged in business in the field of preclinical research services and biorepository services;

WHEREAS, Bioarkive is willing to provide contract research and development services, as defined below and hereby represents that this undertaking does not conflict with its duties and obligations under any other agreement to which it is a party, including any agreement with any other company or institution, and

WHEREAS, Client and/or its affiliated companies as the case may be, wish to engage Bioarkive for the purpose of literature study, molecular and cell biology research, assay development, biostorage, data analysis, and testing therapeutic agents as further specified in a related Project Proposal or related services which Bioarkive may offer on a project-by-project basis.

NOW, THEREFORE, IT IS AGREED AS FOLLOWS:

1.0 BIOARKIVE SERVICES

1.1 Upon engagement by Client hereunder, Bioarkive, (hereinafter referred as to as the "**Service Provider**"), shall perform preclinical services, including (but not limited to) molecular and cellular biology assays and/or early process research services which may include (but not limited to) literature study, molecular modeling and assay design, feasibility studies and other related services (collectively, the "**Services**") for Client. The Service Provider will prepare a quotation or project proposal ("**Project Proposal**") for each request from Client in which, as appropriate, the project goal and/or purpose, the information desired, the experimental procedures or general synthetic approach (derived from literature, patents or other sources of information), the estimated duration of the project, the price, payment terms and payment schedule and all other relevant matters will be described.

1.2 The nature of the Services to be performed by the Service Provider with respect to any individual project as described in a Project Proposal ("**Project**") shall be mutually agreed by the Parties and set forth in a Project Proposal that will become an attachment to this Agreement and will be signed by the Client and the relevant Service Provider. An example of the highlights of a Project Proposal is attached to this Agreement as Appendix 1. Each accepted Project Proposal or any other written assignment related to a Project Proposal shall be subject to all of the terms and conditions of this Agreement. To the extent any terms or provisions of a Project Proposal conflict with the terms and provisions of this Agreement, the terms and provisions of this Agreement shall prevail unless the Project Proposal, signed by both Parties, expressly states to the contrary. Bioarkive agrees that during the term of this Agreement, there is neither a minimum number of Projects for which Client is obligated to utilize Bioarkive, nor does this Agreement in any way limit Client's right to contract with any other Party to provide services similar to that which Bioarkive provides under this Agreement.

1.3 In the event that Bioarkive perform any work or Services prior to execution by the Parties of an accepted Project Proposal for such work or Services, the terms and conditions of this Agreement shall also apply to any such work and Services performed by Bioarkive.

1.4 In consideration of the Services that are performed by the Service Provider under this Agreement, Client will pay the Service Provider the price that has been agreed upon for each accepted Project Proposal or any other written assignment related to a Project Proposal.

Payment and/or reimbursement shall be (a) in accordance with the terms of the accepted Project Proposal or any other written assignment related to a Project Proposal and (b) accompanied by an invoice from the Service Provider reasonably documenting actual costs charged and/or fees earned. All fees and reimbursable expenses relating to the Services described in an accepted Project Proposal shall be payable and invoiced upon completion of all Services or according to the agreed payment schedule as outlined in the accepted Project Proposal. Invoices received and thereafter approved for payment by Client shall be paid to the Service Provider within thirty (30) days after date of invoice.

1.5 If requested by Client, the Service Provider shall consult with Client to assist Client in describing the Project goal and/or purpose. Bioarkive represents that the Service Provider will provide all reasonable efforts to assist Client in a manner consistent with current regulatory guidelines.

1.6 The Service Provider shall appoint a "Project Manager" to be responsible for a Project performed for Client. The Project Manager shall coordinate performance of the Project with a representative designated by Client, which representative shall have responsibility over all matters related to the outcome of the Project on behalf of Client.

1.7 The Service Provider will communicate with Client scientists and with Client on a regular basis, and will respond upon all reasonable requests, regarding all Projects. The Service Provider will provide written reports to Client at regular, defined and mutually agreeable intervals describing the results and including full experimental procedures, as further set forth in the Project Proposal.

1.8 The Service Provider shall retain for a period of at least five (5) years from the completion of a Project or such mandatory period as defined by applicable laws, whichever is longer, (a) experimental records and laboratory notebooks containing experimental descriptions and data generated from such Project and may store (b) research samples, where applicable, for reference purposes.

2.0 COMPLIANCE WITH GOVERNMENT REGULATIONS

2.1 The Service Provider shall perform each Project in accordance with applicable laws, regulations, the current state of the laboratory research art and the relevant Project Proposal. The Service Provider shall also comply with all applicable current government regulatory requirements. In the event Client requires any special procedures to be undertaken by the Service Provider (e.g., to satisfy foreign standards or requirements or otherwise) such procedures ("Client Procedures") will be provided in writing by Client to the Service Provider and require prior written approval by the Service Provider. Service Provider shall perform each Project in accordance with all agreed-upon Client Procedures.

2.2 The Service Provider shall provide the following for each Project:

(a) Labor, facilities and materials

(b) Preclinical data analysis experiments completed during a Project including an interim summary report;

(c) Subject to section 1.8 and upon request of Client any data and other research materials resulting from a Project;

(d) A final report setting forth a full summary of the results of a Project, including a summary of all relevant data; and

(e) Necessary professional and support personnel for a Project.

2.3 Bioarkive shall assure compliance with all applicable laws and regulations regarding the disposal of hazardous materials.

3.0 CONFIDENTIAL INFORMATION

3.1 During the Term of this Agreement and for a period of seven (7) years following the termination or expiration, either Party agrees to retain in confidence and to refrain from disclosing or using for its benefit or the benefit of any third party, any and all information, test materials or data disclosed to such Party by the other Party ("**Confidential Information**"). This restriction shall not apply to Confidential Information:

(a) in or entering the public domain (through no fault of the receiving Party);

(b) made available to the receiving Party by an independent third party owing no obligation of confidentiality to the disclosing Party with regard thereto;

(c) already in the receiving Party's possession at the time of receipt from the disclosing Party (and such prior possession can be properly demonstrated by the receiving Party);

(d) that are independently developed by the receiving Party without the aid, application or use of the Confidential Information (and such independent development can be properly demonstrated by the receiving Party); or

(e) that are required by law, regulation, rule, act, or order of any governmental authority or agency to be disclosed by the receiving Party; provided, however, that the receiving Party (i) gives the disclosing Party sufficient advance written notice to permit it to seek a protective order or other similar order with respect to such Confidential Information received hereunder and (ii) thereafter discloses only the minimum Confidential Information required to be disclosed in order to comply, whether or not a protective order or other similar order is obtained by the disclosing Party.

Either Party shall only provide the Confidential Information received from the other Party hereunder to its directors, officers, employees, agents, subcontractors, and consultants who are directly concerned with a Project and who have written obligations of confidentiality with such Party substantially similar to those set forth herein.

3.2 Upon completion of a Project or at any other time at the disclosing Party's request, the receiving Party shall upon request either destroy or promptly return to the disclosing Party any and all Confidential Information, in any form or media, except that the receiving Party shall be entitled to retain one (1) archival copy of such Confidential Information for legal purposes.

3.3 The provision contained in this section 3, equally apply to any and all information, test materials or data generated under the Project and owned by Client pursuant to section 4, which information, test materials or data shall be considered Confidential Information of the Client.

4.0 PROJECT RESULTS

4.1 All data and information, including Client Inventions as defined under 5.1, arising from the performance of the Services listed in the accepted Project Proposal hereunder, (including but not limited to records, original experimental reports, other material(s) and data), except to the extent such experimental data and information solely relate to the Bioarkive Property (as defined in section 5.2), shall be deemed the intellectual property of Client ("**Client Results**").

4.2 Client shall retain title to and shall have the right to publish all Client Results. Client Results shall be retained in the Bioarkive archive in compliance with regulatory and legal requirements or at such archival site as determined by Client at Client's expense.

4.3 Any and all results generated during or resulting from the Services performed by Bioarkive that solely relate to the Bioarkive Property, shall be deemed the intellectual property of Bioarkive.

4.4 Electronic archival, if available, shall be kept in accordance with the industry standard and in compliance with relevant regulatory and legal requirement.

4.5 To the extent that Services to be performed under a Project Proposal include the development of novel, non-standard preclinical assays for use by Client (each, a "Client-Specific Assay"), each Client-Specific Assay shall be owned by Bioarkive but (a) be licensed exclusively by Bioarkive to Client for use exclusively by or on behalf of Client for a period of three years, and (b) thereafter be licensed non-exclusively by Bioarkive to Client thereafter for use by or on behalf of Client. Such license shall at all times be worldwide, perpectual, irrevocable, royalty-free and fully paid-up.

5.0 INVENTIONS AND PATENTS

5.1 Bioarkive shall promptly notify Client in writing of any and all ideas, innovations, inventions, methods, developments or improvements, whether or not patentable, discovered or arising from the performance of a Project conducted hereunder to the extent such experimental data and information do not relate to the Bioarkive Property ("**Client Inventions**"). Subject to Section 4.5, Bioarkive hereby assigns and agrees to assign to Client all rights, title and interest in and to such Client Inventions. If Client requests, and at Client's expense, Bioarkive shall provide Client with reasonable assistance to obtain patents for such Client Inventions.

5.2 The Parties acknowledge and agree that Bioarkive has proprietary testing protocols, processes, programming, methodology, techniques, equipment and know-how existing as of the Effective Date of this Agreement or developed wholly independent of the Services that are its sole and exclusive property ("**Bioarkive Property**") and that any ideas, innovations, inventions, developments or improvements, whether or not patentable, solely relating to such testing protocols, processes, programming, methodology, techniques, equipment and know-how conceived solely by Bioarkive shall be and remain the sole and exclusive intellectual property of Bioarkive, subject to Section 4.5.

6.0 LIABILITY

6.1 The Service Provider accepts only liability towards Client in respect of damages resulting from a failure directly attributable to the Service Provider in the performance of its obligations under this Agreement or for gross negligence or willful misconduct. The Service Provider shall not be liable for any damage originating from any materials or information supplied by Client hereunder provided such materials and information are only used by Bioarkive for the performance of its obligations hereunder in its premises under suitable containment conditions.

6.2 In the event of improper, incorrect performance or performance not in accordance with applicable standards or applicable laws by the Service Provider of the work under the Services, Client shall have the right to demand the Service Provider to re-perform the work without any charge to Client.

6.3 Except in instances of breaches of confidentiality, gross negligence or willful misconduct, the liability of the Service Provider for any shortcomings in the execution of the Services will be limited to a maximum of the fees for the Services that Service Provider has received for the Services provided hereunder.

6.4 EXCEPT FOR THE WARRANTIES PROVIDED IN THIS AGREEMENT, THE SERVICE PROVIDER MAKES ANY WARRANTY, EXPRESS OR IMPLIED, BY STATUTE OR IN WRITING, REGARDING THE SERVICES OR ANY PRODUCT RESULTING FROM THE SERVICES, INCLUDING WITHOUT LIMITATION ANY WARRANTY REGARDING THEIR FITNESS FOR ANY PURPOSE, THEIR QUALITY, THEIR MERCHANTABILITY OR THEIR NON-INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES. ANY OTHER REPRESENTATIONS OR WARRANTIES MADE BY ANY PERSON OR ENTITY, INCLUDING EMPLOYEES OR REPRESENTATIVES OF THE SERVICE PROVIDER, THAT ARE INCONSISTENT HEREWITH, SHALL BE DISREGARDED AND SHALL NOT BE BINDING ON THE SERVICE PROVIDER.

6.5 Except to the extent arising from Bioarkive's gross negligence or willful misconduct, the Client shall indemnify and hold Bioarkive and its affiliated companies harmless from any third-party claims arising out of the use of the Client Results.

6.6 NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR INDIRECT, INCIDENTIAL OR CONSEQUENTIAL DAMAGES ARISING OUT ANY TERMS AND CONDITIONS OF THIS AGREEMENT OR WITH RESPECT TO ITS PERFORMANCE HEREUNDER EXCEPT TO THE EXTENT SUCH DAMAGES WERE CAUSED BY GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF SUCH PARTY.

6.7 Each Party will secure and maintain in full force and effect throughout the term of this Agreement adequate insurance coverage appropriate for the business of the type that is subject of this Agreement and its obligations under this Agreement. If requested by a Party, the other Party shall provide the first Party with photocopies of the relevant certificates of insurance.

7.0 TERM AND TERMINATION

7.1 The term of the Agreement shall be three (3) years from the Effective Date. Thereafter, the Agreement shall be renewed for successive one (1) year terms, unless terminated upon three (3) months prior notice by either Party before the anniversary of the Agreement.

7.2 If either Party is in breach of its obligations under this Agreement then the Party not in breach is entitled to serve notice in writing to the Party in breach setting out details of the breach, what actions are required to correct the breach and allowing the Party in breach thirty (30) days from the date of notification in writing to correct the breach.

7.3 Either Party shall have the right to terminate this Agreement and/or an accepted Project Proposal, effective immediately upon written notice to the other Party, should the other Party continue to be in material breach of this Agreement, provided, that a notice of material breach pursuant to Section 7.2 has been served on the Party in material breach and the Party in material breach has failed to correct the material breach within the thirty (30) day cure period.

7.4 Either Party may terminate this Agreement, effective immediately upon written notice to the other Party, if the other Party: (i) files a voluntary petition in bankruptcy or has an involuntary bankruptcy petition filed against it, which is not dismissed within thirty (30) days after its institution, (ii) is adjudged as bankrupt, (iii) becomes insolvent, (iv) has a receiver, trustee, conservator or liquidator appointed for all or a substantial part of its assets, (v) ceases to do business, (vi) commences any dissolution, liquidation or winding up, or (vii) makes an assignment of its assets for the benefit of its creditors.

7.5 An accepted Project Proposal or any other written assignment related to a Project Proposal may be terminated by Client at any time during the term of this Agreement on sixty (60) days prior written notice to the Service Provider.

7.6 Except in the event of a termination by Client according to Section 7.3, if this Agreement, any particular accepted Project Proposal or any particular other written assignment related to a Project Proposal is terminated before any such Project Proposal or any such other written assignment related to a Project Proposal is completed, Client shall pay Service Provider for all Services performed in accordance with any such affected Project Proposal or any such other written assignment related to a Project Proposal hereunder, and reimburse the Service Provider for all costs and expenses incurred in performing those Services.

7.7 The termination of this Agreement shall not relieve either Party of its obligation to the other with respect to (a) maintaining the confidentiality of information, (b) liability and, (c) compensation for Services performed through the date of termination.

8.0 MISCELLANEOUS

8.1 Assignment and Subcontracting. This Agreement and any Project shall not be assigned by Bioarkive or its affiliated companies without the prior written consent of Client, except in connection with the sale of the business to which this Agreement pertains.

Bioarkive shall have the right to subcontract or delegate any portion of the Services hereunder to third parties ("**Subcontractors**") only with Client's prior written consent; provided, that no consent shall be necessary for Bioarkive's delegation to or use of Subcontractors that are set forth in the relevant Project Proposal as performing such Services. In any event, Bioarkive shall remain solely and fully liable for the performance of such Subcontractors to which it delegates the performance of its obligations under this Agreement. Bioarkive shall ensure that each of its Subcontractors performs Bioarkive's obligations pursuant to the terms of this Agreement. For clarity, to the extent Bioarkive has an obligation under this Agreement to perform an action or to meet a standard, and Bioarkive subcontracts such obligation, Bioarkive shall be responsible for any failure by its Subcontractor to perform the action or meet the standard.

8.2 Notice. All notices required by this Agreement shall be in writing. All notices shall be sent by e-mail confirmed by registered or certified mail to the Parties within three (3) business days at the following addresses or such other addresses as may be designated in writing by the respective Parties:

Notices to Bioarkive: Bioarkive, LLC

11421 W Bernardo Court
Suite 200
San Diego, CA 92127

Attn. of: Praveen Nair, Ph.D. (CEO)
E-mail: pnair@bioarkive.com

Notices to Company: Immuneering
245 Main St, Second Floor
Cambridge, MA 02142

Attn. of: Peter King, Ph.D. (VP Discovery)
E-mail: pking@immuneering.com

8.3 Force Majeure. A Party shall be excused from performing its obligations under this Agreement if its performance is delayed or prevented by any cause beyond such Party's control, including but not limited to, acts of God, fire, explosion, disease, weather, war, insurrection, civil strife, riots, government action, or power failure. Performance shall be excused only to the extent of and during the reasonable continuance of such disability. Any deadline or time for performance specified in an accepted Project Proposal that falls due during or subsequent to the occurrence of any of the disabilities referred to herein shall be automatically extended for a period of time equal to the period of such disability. Bioarkive shall immediately notify Client if, by reason of any of the disabilities referred to herein, the Service Provider is unable to meet any deadline or time for performance specified in an accepted Project Proposal.

8.4 Independent Contractor. Bioarkive shall perform each Project as an independent contractor and shall have complete and exclusive control over its employees, consultants and agents. The Services rendered by Bioarkive are those of an independent contractor and not those of Client. No Services rendered pursuant to this Agreement shall be construed to deem Bioarkive or its affiliated companies an employee, agent or joint-venture with Client.

8.5 Waiver. No waiver of any term, provision, or condition of this Agreement, whether by conduct or otherwise, in any one or more instances shall be deemed to be or construed as a further or continuing waiver of any such term, provision, or condition or of any other term, provision, or condition of this Agreement.

8.6 Severability. This Agreement is divisible and separable so that if any provision(s) shall be held to be invalid, such invalidity shall not impair the remaining provisions thereof.

8.7 Applicable Law and Competent Court. This Agreement shall be governed by the laws of Delaware, USA. Any claim or controversy arising out of or related to this Agreement or any breach hereof shall be submitted to the competent courts of the state of Delaware, USA, and each Party hereby consents to the exclusive jurisdiction and venue of such court.

8.8 Entire Agreement. This Agreement, together with its attachments, represents the entire understanding of the Parties with respect to the subject matter hereof and hereby supersedes all prior understanding and agreements, whether oral or written, between the Parties with respect to any Services to be performed.

8.9 Attachments/Addenda. Any attachment(s) and/or accepted Project Proposals are deemed to be an integrated part of this Agreement and all references to this Agreement shall be deemed to include all such attachments and accepted Project Proposals.

8.10 Security. Bioarkive warrants and represents that it shall maintain adequate security at its facilities for the term of this Agreement to ensure that the Services and each Project are performed within the time frame set forth in an accepted Project Proposal, and such Services and Project shall not be compromised or disrupted by any breach of security.

* * * *

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed, by duly authorized representatives on the Effective Date.

Bioarkive		Immuneering Corporation	
Date:	August 5, 2019	Date:	August 5, 2019
By:	/s/ Praveen Nair	By:	/s/ Benjamin J. Zeskind
Name:	Praveen Nair	Name:	Benjamin J. Zeskind
Title:	CEO	Title:	CEO
Date:		Date:	
By:		By:	
Name:		Name:	
Title:		Title:	

Appendix 1

PROJECT PROPOSAL

The Project Proposal will contain amongst others the following elements if relevant for the Project:

Background

Project description

Deliverables, requirements and general conditions

- Tasks
- Experimental details (methods)
- Starting and end date
- Resources
- Sub-contractors
- Pricing and costs
- Description
- Shipment details
- Contact persons
- Reporting
- Payment terms
- Validity

This Project Proposal is pursuant to, and incorporates the provisions of the Master Services Agreement with Effective Date August 5th, 2019 by and between Bioarkive, LLC and Immuneering Corporation.

Bioarkive, LLC

Dennis Garland, MS
Director of Operations

Praveen Nair, Ph.D.
Chief Executive Officer

CC:

Proposal accepted by Immuneering:

Date:	_____	Date:	_____
By:	_____	By:	_____
Name:	_____	Name:	_____
Title:	_____	Title:	_____

Exhibit 10.3

September 17, 2019

PEF LLC

Subject: Advisor to Immuneering Corporation

Dear PEF LLC,

Immuneering Corporation (the "***Company***") is pleased to invite you to serve as an Advisor to the Company. This letter will set forth the terms and conditions of your participation as an advisor to the Company commencing on the date hereof (the "***Effective Date***").

1. Services. You agree to serve as an Advisor to the Company. You have been chosen for this position because of your expertise in areas that are consistent with the Company's business and strategy, and your track record of successfully introducing us to new services clients, potential investors, business partners, and academic key opinion leaders. As an Advisor, we hope that you will contribute to the success of the Company by engaging in the following activities, as reasonably requested by the Company from time to time (the "***Services***"):

- Ø Advising the Company through telephone, e-mail and in-person communications as well as attending periodic meetings (via telephone or in-person) with other Advisors.
- Ø Advising the Company on business matters in your area of expertise, including guidance on business strategy, partnership negotiations, capital raising and similar matters.
- Ø Introducing the Company to potential employees, consultants, investors, scientific collaborators, and business partners.
- Ø Advising the Company on market strategies and trends in areas of interest to the Company.
- Ø Endorsing the Company to potential business partners as well as to industry and financial analysts and "thought leaders."
- Ø Providing advice to the Company on matters related to the Company's research and development efforts, concepts and strategies.

Unless otherwise notified, I will serve as your primary point of contact with the Company regarding your role as an Advisor. For avoidance of doubt, you shall not be required to devote more than five hours per month to the performance of your duties hereunder.

2. Compensation. In consideration for your participation as an Advisor, you shall receive a warrant for the purchase of 73,000 shares of common stock of the Company at a price per share equal to the fair market value at the time of Board approval. The warrant will vest immediately and be exercisable on or after the one year anniversary of the Effective Date. The warrant will be exercisable immediately upon a change in control of the Company.

You will be reimbursed for any reasonable travel and incidental expenses incurred associated with serving as an Advisor, subject to the Company's generally applicable policies for the reimbursement of employee expenses.

3. Independent Contractor. In performing Services for the Company pursuant to this letter agreement, you will act in the capacity of an independent contractor with respect to the Company and not as an employee of the Company. You acknowledge that you have no authority to act on behalf of the Company, including, without limitation, to enter into any contract or agreement on behalf of and in the name of the Company. As an independent contractor, you will not be eligible to participate in any of the Company's employee benefit plans, fringe benefit programs, group insurance arrangements or similar programs and you will be solely responsible for any tax withholdings and the like.

4. Conflict of Interest. The Company recognizes and agrees that you may perform services for other persons and entities, provided that such services do not represent a conflict of interest, such as by serving as an advisor for a direct competitor of the Company, or a breach of your duties to the Company. By signing this letter agreement, you represent and warrant to the Company that your participation as an Advisor to the Company will not be inconsistent with any other contractual commitments that you may already have, and you agree that you will not disclose to the Company or induce the Company to use any confidential or proprietary information or material belonging to any current or previous employer or others.

5. Confidentiality. You agree that all information, whether or not in writing, of a private, secret or confidential nature concerning the Company's business, business relationships, technology or financial affairs (collectively, "***Confidential Information***") is and shall be the exclusive property of the Company. During the term of this letter agreement and for a period of three years thereafter, you will not, without the prior written consent of the Company, use for any purpose (except in the course providing Services under this letter agreement in furtherance of the business of the Company) or disclose to any third party any Confidential Information. Confidential Information will not include any information known generally to the public (other than as a result of unauthorized disclosure by you) or information that you received from third parties who do not have an obligation to maintain the confidentiality of the information disclosed. You may disclose the Company's Confidential Information if you are required to do so by law or court order, provided that you (i) promptly notify the Company of such required disclosure and (ii) use all reasonable efforts to minimize the extent of such required disclosure. You agree to deliver to the Company or destroy, as requested by the Company, at the termination of your service as an Advisor, or at any other time that the Company may request, all written or electronic memoranda, notes, plans, records, reports and other documents (and copies thereof) relating to the business of the Company which you may then possess or have under your control.

6. Publicity. The Company will not use your name, likeness or work product in connection with promotion of its business, products and services or to allow others to do so without your prior written approval, provided that the Company may list you on its website and in investor presentations as an advisor to the Company. You agree to use reasonable efforts to inform the Company whether it may use your name, likeness or work product within five days after the Company notifies you of any such proposed use.

7. **Term of Agreement.** The term of your participation as an advisor shall be one (1) year from the Effective Date, subject to renewal by our mutual agreement. You may terminate your participation as an advisor for any reason with ten (10) days prior written notice. We may terminate your participation as an advisor for breach of the terms of this letter Agreement that, if capable of being cured, is not cured within a reasonable time of no less than ten (10) days following written notice of such breach by the Company to you. Following termination of this letter agreement, the provisions of paragraphs 5 through 8 shall survive.

8. **General Provisions.** This letter agreement (together your warrant agreement) contains all of the terms of your participation as an Advisor of the Company and no agreements, representations or understandings (whether oral or written and whether express or implied) which are not expressly set forth in this letter agreement have been made or entered into by either party with respect to the subject matter hereof. You agree that any of the Company's rights or obligations hereunder may be assigned to any successor or resultant corporation in a merger or consolidation or other acquisition of the Company or its subsidiary, but that you may not assign any of your rights or obligations under this letter agreement without the prior written consent of the Company. This letter agreement may not be amended or modified except by an express written agreement signed by you and a duly authorized officer of the Company. The terms of this letter agreement and the resolution of any disputes will be governed by Massachusetts law without reference to its conflicts of laws provisions. Any breach of paragraph 5 will cause irreparable harm to the Company for which damages would not be an adequate remedy, and therefore the Company will be entitled to seek injunctive relief with respect thereto in addition to any other remedies.

[*Signature page follows.*]

We hope that you find the foregoing terms acceptable. You may indicate your agreement with these terms and accept this offer by signing and dating the enclosed duplicate original of this letter and returning it to me. This offer, if not accepted, will expire at the close of business on September 20, 2019**.**

Very truly yours,

Immuneering Corporation

By: /s/ Benjamin J. Zeskind
Name: Benjamin J. Zeskind
Title: Co-Founder and CEO

[*Signature Page to Advisory Agreement*]

I have read, understand and accept this offer:

PEF LLC

By: /s/ Peter Feinberg
Name: Peter Feinberg
Title: Manager Member

Dated: _____

[*Signature Page to Advisory Agreement*]

Exhibit 10.4

IMMUNEERING CORPORATION

2008 STOCK INCENTIVE PLAN

1. Purpose

The purpose of this 2008 Stock Incentive Plan (the "Plan") of Immuneering Corporation, a Delaware corporation (the "Company"), is to advance the interests of the Company's stockholders by enhancing the Company's ability to attract, retain and motivate persons who are expected to make important contributions to the Company and by providing such persons with equity ownership opportunities and performance-based incentives that are intended to better align the interests of such persons with those of the Company's stockholders. Except where the context otherwise requires, the term "Company" shall include any of the Company's present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Internal Revenue Code of 1986, as amended, and any regulations promulgated thereunder (the "Code") and any other business venture (including, without limitation, joint venture or limited liability company) in which the Company has a controlling interest, as determined by the Board of Directors of the Company (the "Board").

2. Eligibility

All of the Company's employees, officers, directors, consultants and advisors are eligible to be granted options, restricted stock, restricted stock units ("RSUs") and other stock-based awards (each, an "Award") under the Plan. Each person who receives an Award under the Plan is deemed a "Participant".

3. Administration and Delegation

(a) Administration by Board of Directors. The Plan will be administered by the Board. The Board shall have authority to grant Awards and to adopt, amend and repeal such administrative rules, guidelines and practices relating to the Plan as it shall deem advisable. The Board may construe and interpret the terms of the Plan and any Award agreements entered into under the Plan. The Board may correct any defect, supply any omission or reconcile any inconsistency in the Plan or any Award in the manner and to the extent it shall deem expedient to carry the Plan into effect and it shall be the sole and final judge of such expediency. All decisions by the Board shall be made in the Board's sole discretion and shall be final and binding on all persons having or claiming any interest in the Plan or in any Award. No director or person acting pursuant to the authority delegated by the Board shall be liable for any action or determination relating to or under the Plan made in good faith.

(b) Appointment of Committees. To the extent permitted by applicable law, the Board may delegate any or all of its powers under the Plan to one or more committees or subcommittees of the Board (a "Committee"). All references in the Plan to the "Board" shall mean the Board or a Committee of the Board or the officers referred to in Section 3(c) to the extent that the Board's powers or authority under the Plan have been delegated to such Committee or officers.

(c) Delegation to Officers. To the extent permitted by applicable law, the Board may delegate to one or more officers of the Company the power to grant Awards (subject to any limitations under the Plan) to employees or officers of the Company or any of its present or future subsidiary corporations and to exercise such other powers under the Plan as the Board may determine, provided that the Board shall fix the terms of the Awards to be granted by such officers (including the exercise price of such Awards, which may include a formula by which the exercise price will be determined) and the maximum number of shares subject to Awards that the officers may grant; provided further, however, that no officer shall be authorized to grant Awards to any "executive officer" of the Company (as defined by Rule 3b-7 under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) or to any "officer" of the Company (as defined by Rule 16a-1 under the Exchange Act).

4. Stock Available for Awards.

(a) Number of Shares. Subject to adjustment under Section 8, Awards may be made under the Plan for up to 510,000 shares of common stock, $.001 par value per share, of the Company (the "Common Stock"). If any Award expires or is terminated, surrendered or canceled without having been fully exercised, is forfeited in whole or in part (including as the result of shares of Common Stock subject to such Award being repurchased by the Company at the original issuance price pursuant to a contractual repurchase right), or results in any Common Stock not being issued, 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 tendered to the Company by a Participant to exercise an Award 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 (as hereinafter defined), the foregoing provisions shall be subject to any limitations under the Code. Shares issued under the Plan may consist in whole or in part of authorized but unissued shares or treasury shares. At no time while there is any Option (as defined below) outstanding and held by a Participant who was a resident of the State of California on the date of grant of such Option, shall the total number of shares of Common Stock issuable upon exercise of all outstanding options and the total number of shares provided for under any stock bonus or similar plan or agreement of the Company exceed the applicable percentage as calculated in accordance with the conditions and exclusions of Section 260.140.45 of the California Code of Regulations (the "California Regulations"), based on the shares of the Company which are outstanding at the time the calculation is made.

(b) 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 Board may grant Awards in substitution for any options or other stock or stock-based awards granted by such entity or an affiliate thereof. Substitute Awards may be granted on such terms as the Board 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(a), except as may be required by reason of Section 422 and related provisions of the Code.

5. Stock Options

(a) General. The Board may grant options to purchase Common Stock (each, an "Option") and 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 conditions relating to applicable federal or state securities laws, as it considers necessary or advisable. An Option that is not intended to be an Incentive Stock Option (as hereinafter defined) shall be designated a "Nonstatutory Stock Option".

(b) Incentive Stock Options. An Option that the Board intends to be an "incentive stock option" as defined in Section 422 of the Code (an "Incentive Stock Option") shall only be granted to employees of Immuneering Corporation, any of Immuneering Corporation's present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Code, and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code, and shall be subject to and shall be construed consistently with the requirements of Section 422 of the Code. The Company shall have no liability to a Participant, or any other party, if an Option (or any part thereof) that is intended to be an Incentive Stock Option is not an Incentive Stock Option or for any action taken by the Board, including without limitation the conversion of an Incentive Stock Option to a Nonstatutory Stock Option.

(c) Exercise Price. The Board shall establish the exercise price of each Option and specify the exercise price in the applicable option agreement. The exercise price shall be not less than 100% of the Fair Market Value (as defined below) on the date the Option is granted.

(d) Duration of Options. Each Option shall be exercisable at such times and subject to such terms and conditions as the Board may specify in the applicable option agreement.

(e) Exercise of Option. Options may be exercised by delivery to the Company of a written notice of exercise signed by the proper person or by any other form of notice (including electronic notice) approved by the Board together with payment in full as specified in Section 5(f) for the number of shares for which the Option is exercised. Shares of Common Stock subject to the Option will be delivered by the Company as soon as practicable following exercise.

(f) Payment Upon Exercise. Common Stock purchased upon the exercise of an Option granted under the Plan shall be paid for as follows:

(1) in cash or by check, payable to the order of the Company;

(2) when the Common Stock is registered under the Exchange Act, except as may otherwise be provided in the applicable option agreement, by (i) delivery of an irrevocable and unconditional undertaking by a creditworthy broker to deliver promptly to the Company sufficient funds to pay the exercise price and any required tax withholding or (ii) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a creditworthy broker to deliver promptly to the Company cash or a check sufficient to pay the exercise price and any required tax withholding;

(3) when the Common Stock is registered under the Exchange Act and to the extent provided for in the applicable option agreement or approved by the Board, in its sole discretion, by delivery (either by actual delivery or attestation) of shares of Common Stock owned by the Participant valued at their fair market value as determined by (or in a manner approved by) the Board ("Fair Market Value"), provided (i) such method of payment is then permitted under applicable law, (ii) 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 Board in its discretion and (iii) such Common Stock is not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements;

(4) to the extent permitted by applicable law and provided for in the applicable option agreement or approved by the Board, in its sole discretion, by (i) delivery of a promissory note of the Participant to the Company on terms determined by the Board, or (ii) payment of such other lawful consideration as the Board may determine; or

(5) by any combination of the above permitted forms of payment.

6. Restricted Stock; Restricted Stock Units

(a) General. The Board may grant Awards entitling recipients to acquire shares of Common Stock ("Restricted Stock"), 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 (or to require forfeiture of such shares if issued at no cost) from the recipient in the event that conditions specified by the Board in the applicable Award are not satisfied prior to the end of the applicable restriction period or periods established by the Board for such Award. Instead of granting Awards for Restricted Stock, the Board may grant Awards entitling the recipient to receive shares of Common Stock or cash to be delivered at the time such Award vests ("Restricted Stock Units") (Restricted Stock and Restricted Stock Units are each referred to herein as a "Restricted Stock Award").

(b) Terms and Conditions for All Restricted Stock Awards. The Board shall determine the terms and conditions of a Restricted Stock Award, including the conditions for vesting and repurchase (or forfeiture) and the issue price, if any.

(c) Additional Provisions Relating to Restricted Stock.

(1) Dividends. Participants holding shares of Restricted Stock will be entitled to all ordinary cash dividends paid with respect to such shares, unless otherwise provided by the Board. Unless otherwise provided, by the Board, if any dividends or distributions are paid in shares, or consist of a dividend or distribution to holders of Common Stock other than an ordinary cash dividend, the shares, cash 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 no later than the end of the calendar year in which the dividends are paid to shareholders of that class of stock or, if later, the 15th day of the third month following the date the dividends are paid to shareholders of that class of stock.

(2) Stock Certificates. The Company may require that any stock certificates issued in respect of shares of Restricted Stock shall be deposited in escrow by the Participant, together with a stock power endorsed in blank, with the Company (or its designee). At the expiration of the applicable restriction periods, the Company (or such designee) shall deliver the certificates no longer subject to such restrictions to the Participant or if the Participant has died, to the beneficiary designated, in a manner determined by the Board, by a Participant to receive amounts due or exercise rights of the Participant in the event of the Participant's death (the "Designated Beneficiary"). In the absence of an effective designation by a Participant, "Designated Beneficiary" shall mean the Participant's estate.

7. Other Stock-Based Awards

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, may be granted hereunder to Participants ("Other Stock-Based Awards"), including without limitation stock appreciation rights ("SARs") and Awards entitling recipients 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 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 or cash, as the Board shall determine. Subject to the provisions of the Plan, the Board shall determine the terms and conditions of each Other Stock-Based Award, including any purchase price applicable thereto.

8. Adjustments for Changes in Common Stock and Certain Other Events

(a) Changes in Capitalization. In the event of any stock split, reverse stock split, stock dividend, recapitalization, combination of shares, reclassification of shares, spin-off or other similar change in capitalization or event, or any dividend or distribution to holders of Common Stock other than an ordinary cash dividend, (i) the number and class of securities available under this Plan, (ii) the number and class of securities and exercise price per share of each outstanding Option, (iii) the number of shares subject to and the repurchase price per share subject to each outstanding Restricted Stock Award, and (iv) the terms of each other outstanding Award shall be equitably adjusted by the Company (or substituted Awards may be made, if applicable) in the manner determined by the Board. Without limiting the generality of the foregoing, in the event the Company effects a split of the Common Stock by means of a stock dividend and the exercise price of and the number of shares subject to an outstanding Option are adjusted as of the date of the distribution of the dividend (rather than as of the record date for such dividend), then an optionee who exercises an Option between the record date and the distribution date for such stock dividend shall be entitled to receive, on the distribution date, the stock dividend with respect to the shares of Common Stock acquired upon such Option exercise, notwithstanding the fact that such shares were not outstanding as of the close of business on the record date for such stock dividend.

(b) Reorganization Events.

(1) Definition. A "Reorganization Event" shall mean: (a) any merger or consolidation of the Company with or into another entity as a result of which all of the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property or is cancelled, (b) any exchange of all of the Common Stock of the Company for cash, securities or other property pursuant to a share exchange transaction or (c) any liquidation or dissolution of the Company.

(2) Consequences of a Reorganization Event on Awards Other than Restricted Stock Awards. In connection with a Reorganization Event, the Board may take any one or more of the following actions as to all or any (or any portion of) outstanding Awards other than Restricted Stock Awards on such terms as the Board determines: (i) provide that Awards shall be assumed, or substantially equivalent Awards shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof), (ii) upon written notice to a Participant, provide that the Participant's unexercised Awards will terminate immediately prior to the consummation of such Reorganization Event unless exercised by the Participant within a specified period following the date of such notice, (iii) provide that outstanding Awards shall become exercisable, realizable, or deliverable, or restrictions applicable to an Award shall lapse, in whole or in part prior to or upon such Reorganization Event, (iv) in the event of a Reorganization Event under the terms of which holders of Common Stock will receive upon consummation thereof a cash payment for each share surrendered in the Reorganization Event (the "Acquisition Price"), make or provide for a cash payment to a Participant equal to the excess, if any, of (A) the Acquisition Price times the number of shares of Common Stock subject to the Participant's Awards (to the extent the exercise price does not exceed the Acquisition Price) over (B) the aggregate exercise price of all such outstanding Awards and any applicable tax withholdings, in exchange for the termination of such Awards, (v) provide that, in connection with a liquidation or dissolution of the Company, Awards shall convert into the right to receive liquidation proceeds (if applicable, net of the exercise price thereof and any applicable tax withholdings) and (vi) any combination of the foregoing. In taking any of the actions permitted under this Section 8(b), the Board shall not be obligated by the Plan to treat all Awards, all Awards held by a Participant, or all Awards of the same type, identically.

For purposes of clause (i) above, an Option shall be considered assumed if, following consummation of the Reorganization Event, the Option confers the right to purchase, for each share of Common Stock subject to the Option immediately prior to the consummation of the Reorganization Event, the consideration (whether cash, securities or other property) received as a result of the Reorganization Event by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Reorganization Event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); provided, however, that if the consideration received as a result of the Reorganization Event is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise of Options to consist solely of common stock of the acquiring or succeeding corporation (or an affiliate thereof) equivalent in value (as determined by the Board) to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Reorganization Event.

(3) Consequences of a Reorganization Event on Restricted Stock Awards. Upon the occurrence of a Reorganization Event other than a liquidation or dissolution of the Company, the repurchase and other rights of the Company under each outstanding Restricted Stock Award shall inure to the benefit of the Company's successor and shall, unless the Board determines otherwise, apply to the cash, securities or other property which the Common Stock was converted into or exchanged for pursuant to such Reorganization Event in the same manner and to the same extent as they applied to the Common Stock subject to such Restricted Stock Award. Upon the occurrence of a Reorganization Event involving the liquidation or dissolution of the Company, except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock Award or any other agreement between a Participant and the Company, all restrictions and conditions on all Restricted Stock Awards then outstanding shall automatically be deemed terminated or satisfied.

9. General Provisions Applicable to Awards

(a) Transferability of Awards. Except as the Board may otherwise determine or provide in an Award, Awards 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 or, other than in the case of an Incentive Stock Option, pursuant to a qualified domestic relations order, 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.

(b) Documentation. Each Award shall be evidenced in such form (written, electronic or otherwise) as the Board shall determine. Each Award may contain terms and conditions in addition to those set forth in the Plan.

(c) Board 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 need not be identical, and the Board need not treat Participants uniformly.

(d) Termination of Status. The Board shall determine the effect on an Award of the disability, death, termination or other cessation of employment, authorized leave of absence or other change in the employment or other status of a Participant and the extent to which, and the period during which, the Participant, or the Participant's legal representative, conservator, guardian or Designated Beneficiary, may exercise rights under the Award.

(e) Withholding. The Participant must satisfy all applicable federal, state, and local or other income and employment tax withholding obligations before the Company will deliver stock certificates or otherwise recognize ownership of Common Stock under an Award. The Company may decide to satisfy the withholding obligations through additional withholding on salary or wages. If the Company elects not to or cannot withhold from other compensation, the Participant must pay the Company the full amount, if any, required for withholding or have a broker tender to the Company cash equal to the withholding obligations. Payment of withholding obligations is due before the Company will issue any shares on exercise or release from forfeiture of an Award or, if the Company so requires, at the same time as is payment of the exercise price unless the Company determines otherwise. If provided for in an Award or approved by the Board in its sole discretion, a Participant may satisfy such tax obligations in whole or in part by delivery of shares of Common Stock, including shares retained from the Award creating the tax obligation, valued at their Fair Market Value; provided, however, except as otherwise provided by the Board, that the total tax withholding where stock is being used to satisfy such tax obligations cannot exceed the Company's minimum statutory withholding obligations (based on minimum statutory withholding rates for federal and state tax purposes, including payroll taxes, that are applicable to such supplemental taxable income). Shares surrendered to satisfy tax withholding requirements cannot be subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements.

(f) Amendment of Award.

(1) The Board 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 realization, and converting an Incentive Stock Option to a Nonstatutory Stock Option. The Participant's consent to such action shall be required unless (i) the Board determines that the action, taking into account any related action, would not materially and adversely affect the Participant's rights under the Plan or (ii) the change is permitted under Section 8 hereof.

(2) The Board may, without stockholder approval, amend any outstanding Award granted under the Plan to provide an exercise price per share that is lower than the then-current exercise price per share of such outstanding Award. The Board may also, without stockholder approval, cancel any outstanding award (whether or not granted under the Plan) and grant in substitution therefor new Awards under the Plan covering the same or a different number of shares of Common Stock and having an exercise price per share lower than the then-current exercise price per share of the cancelled award.

(g) 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 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 Company may consider appropriate to satisfy the requirements of any applicable laws, rules or regulations.

(h) Acceleration. The Board may at any time provide that any Award shall become immediately 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.

10. Miscellaneous

(a) 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, except as expressly provided in the applicable Award.

(b) No Rights As Stockholder. Subject to the provisions of the applicable Award, 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.

(c) 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 expiration of 10 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.

(d) Amendment of Plan. The Board may amend, suspend or terminate the Plan or any portion thereof at any time; provided that if at any time the approval of the Company's stockholders is required as to any modification or amendment under Section 422 of the Code or any successor provision with respect to Incentive Stock Options, the Board may not effect such modification or amendment without such approval. Unless otherwise specified in the amendment, any amendment to the Plan adopted in accordance with this Section 10(d) shall apply to, and be binding on the holders of, all Awards outstanding under the Plan at the time the amendment is adopted, provided the Board determines that such amendment does not materially and adversely affect the rights of Participants under the Plan.

(e) Authorization of Sub-Plans. The Board may from time to time establish one or more sub-plans under the Plan for purposes of satisfying applicable blue sky, securities or tax laws of various jurisdictions. The Board shall establish such sub-plans by adopting supplements to this Plan containing (i) such limitations on the Board's discretion under the Plan as the Board deems necessary or desirable or (ii) such additional terms and conditions not otherwise inconsistent with the Plan as the Board shall deem necessary or desirable. All supplements adopted by the Board shall be deemed to be part of the Plan, but each supplement shall apply only to Participants within the affected jurisdiction and the Company shall not be required to provide copies of any supplement to Participants in any jurisdiction which is not the subject of such supplement.

(f) Compliance with Code Section 409A. No Award shall provide for deferral of compensation that does not comply with Section 409A of the Code, unless the Board, at the time of grant, specifically provides that the Award is not intended to comply with Section 409A of the Code. The Company shall have no liability to a Participant, or any other party, if an Award that is intended to be exempt from, or compliant with, Section 409A is not so exempt or compliant or for any action taken by the Board.

(g) 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, excluding choice-of-law principles of the law of such state that would require the application of the laws of a jurisdiction other than such state.

IMMUNEERING CORPORATION

2008 STOCK INCENTIVE PLAN

CALIFORNIA SUPPLEMENT

Pursuant to Section 10(e) of the Plan, the Board has adopted this supplement for purposes of satisfying the requirements of Section 25102(o) of the California Law:

Any 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") shall be subject to the following additional limitations, terms and conditions:

1. Additional Limitations on Options.

(a) Minimum Vesting Rate. Except in the case of Options granted to California Participants who are officers, directors, managers, consultants or advisors of the Company or its affiliates (which Options may become exercisable at whatever rate is determined by the Board), Options granted to California Participants shall become exercisable at a rate of not less than 20% per year over five years from the date of grant; provided, that, such Options may be subject to such reasonable forfeiture conditions as the Board may choose to impose and which are not inconsistent with Section 260.140.41 of the California Regulations.

(b) Minimum Exercise Price. The exercise price of Options granted to California Participants may not be less than 85% of the Fair Market Value of the Common Stock on the date of grant in the case of a Nonstatutory Stock Option or less than 100% of the Fair Market Value of the Common Stock on the date of grant in the case of an Incentive Stock Option; provided, however, that if the California Participant is a person who owns stock possessing more than 10% of the total combined voting power of all classes of stock of the Company or its parent or subsidiary corporations, the exercise price shall be not less than 110% of the Fair Market Value of the Common Stock on the date of grant.

(c) Maximum Duration of Options. No Options granted to California Participants shall have a term in excess of 10 years measured from the Option grant date.

(d) Minimum Exercise Period Following Termination. Unless a California Participant's employment is terminated for cause (as defined by applicable law, the terms of any contract of employment between the Company and such Participant, or in the instrument evidencing the grant of such Participant's Option), in the event of termination of employment of such Participant, such Participant shall have the right to exercise an Option, to the extent that he or she was otherwise entitled to exercise such Option on the date employment terminated, as follows: (i) at least six months from the date of termination, if termination was caused by such Participant's death or "permanent and total disability" (within the meaning of Section 22(e)(3) of the Code) and (ii) at least 30 days from the date of termination, if termination was caused other than by such Participant's death or "permanent and total disability" (within the meaning of Section 22(e)(3) of the Code).

(e) Limitation on Repurchase Rights. If an Option granted to a California Participant gives the Company the right to repurchase shares of Common Stock issued pursuant to the Plan upon termination of employment of such Participant, the terms of such repurchase right must comply with Section 260.140.41(k) of the California Regulations.

2. Additional Limitations for Restricted Stock Awards.

(a) Minimum Purchase Price. The purchase price for a Restricted Stock Award granted to a California Participant shall be not less than 85% of the Fair Market Value of the Common Stock at the time such Participant is granted the right to purchase shares under the Plan or at the time the purchase is consummated; provided, however, that if such Participant is a person who owns stock possessing more than 10% of the total combined voting power or value of all classes of stock of the Company or its parent or subsidiary corporations, the purchase price shall be not less than 100% of the Fair Market Value of the Common Stock at the time such Participant is granted the right to purchase shares under the Plan or at the time the purchase is consummated.

(b) Limitation of Repurchase Rights. If a Restricted Stock Award granted to a California Participant gives the Company the right to repurchase shares of Common Stock issued pursuant to the Plan upon termination of employment of such Participant, the terms of such repurchase right must comply with Section 260.140.42(h) of the California Regulations.

3. Additional Limitations for Other Stock-Based Awards. The terms of all Awards granted to a California Participant under Section 7 of the Plan shall comply, to the extent applicable, with Section 260.140.41 or Section 260.140.42 of the California Regulations.

4. Additional Requirement to Provide Information to California Participants. The Company shall provide to each California Participant and to each California Participant who acquires Common Stock pursuant to the Plan, 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 employees whose duties in connection with the Company assure their access to equivalent information.

5. Additional Limitations on Timing of Awards. No Award granted to a California Participant shall become exercisable, vested or realizable, as applicable to such Award, unless the Plan has been approved by the holders of a majority of the Company's outstanding voting securities within 12 months before or after the date the Plan was adopted by the Board.

6. Additional Limitations Relating to Definition of Fair Market Value. For purposes of Section 1(b) and 2(a) of this supplement, "Fair Market Value" shall be determined in a manner not inconsistent with Section 260.140.50 of the California Regulations.

7. Additional Restriction Regarding Recapitalizations, Stock Splits, Etc. For purposes of Section 8 of the Plan, in the event of a stock split, reverse stock split, stock dividend, recapitalization, combination, reclassification or other distribution of the Company's securities, the number of securities allocated to each California Participant must be adjusted proportionately and without the receipt by the Company of any consideration from any California Participant.

IMMUNEERING CORPORATION

Long Term Incentive Plan

1. **Purpose**. The purpose of the Immuneering Corporation Long Term Incentive Plan (the or this "***Plan***") is to provide a means through which Immuneering Corporation, a Delaware corporation (the "***Company***"), and its Subsidiaries may attract and retain able persons as employees, directors and consultants and to provide a means whereby those persons upon whom the responsibilities of the successful administration and management of the Company, and its Subsidiaries, rest, and whose present and potential contributions to the welfare of the Company, and its Subsidiaries, are of importance, can acquire and maintain stock ownership, or awards the value of which is tied to the performance of the Company, thereby strengthening their concern for the welfare of the Company, and its Subsidiaries, and their desire to remain employed. A further purpose of this Plan is to provide such employees, directors and consultants with additional incentive and reward opportunities designed to enhance the profitable growth of the Company. Accordingly, this Plan primarily provides for the granting of Incentive Stock Options, Nonstatutory Stock Options, Restricted Stock, or any combination of the foregoing, as is best suited to the circumstances of the particular individual as provided herein.

2. **Definitions**. For purposes of this Plan, the following terms shall be defined as set forth below:

(a) "***Affiliate***" means any corporation, partnership, limited liability company, limited liability partnership, association, trust or other organization which, directly or indirectly, controls, is controlled by, or is under common control with, the Company. For purposes of the preceding sentence, "control" (including, with correlative meanings, the terms "controlled by" and "under common control with"), as used with respect to any entity or organization, shall mean the possession, directly or indirectly, of the power (i) to vote more than 50% of the securities having ordinary voting power for the election of directors of the controlled entity or organization, or (ii) to direct or cause the direction of the management and policies of the controlled entity or organization, whether through the ownership of voting securities, by contract, or otherwise.

(b) "***Award***" means any Option, Restricted Stock, or Substitute Award, together with any other right or interest granted to a Participant under this Plan.

(c) "***Award Agreement***" means any written instrument that establishes the terms, conditions, restrictions and/or limitations applicable to an Award in addition to those established by this Plan and by the Committee's exercise of its administrative powers. The form of Award Agreement adopted as of the Effective Date will be the only form of Award Agreement pursuant to which Awards may be granted under the Plan and any amendment of the Award Agreement will be subject to Section 8 of the Plan.

(d) "***Board***" means the Board of Directors of the Company.

(e) "***Change of Control***" means the occurrence of any of the following events:

(i) Any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d 3 of the Exchange Act), directly or indirectly, of securities of the Company representing 50% or more of the total voting power represented by the Company's then outstanding voting securities, except that the following shall be deemed not to be a Change in Control: (A) any change in the beneficial ownership of the securities of the Company as a result of a transaction or series of related transactions undertaken primarily for capital-raising purposes and that is approved by the Board; or (B) a transaction the sole purpose of which is to (y) change the state of the Company's incorporation, or (z) create a holding company that shall be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction; or

(ii) The consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; or

(iii) The consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation that would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least 50% of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation.

Notwithstanding the foregoing, for purposes of an Award that provides for a deferral of compensation under the Nonqualified Deferred Compensation Rules, to the extent the impact of a Change of Control on such Award would subject a Participant to additional taxes under the Nonqualified Deferred Compensation Rules, a Change of Control for purposes of such Award will mean both a Change of Control and a "change in the ownership of a corporation," "change in the effective control of a corporation," or a "change in the ownership of a substantial portion of a corporation's assets" within the meaning of the Nonqualified Deferred Compensation Rules as applied to the Company.

(f) "***Code***" means the United States Internal Revenue Code of 1986, as amended from time to time, including regulations thereunder and successor provisions and regulations thereto.

(g) "***Committee***" means a committee of one or more directors designated by the Board to administer this Plan.

(h) "***Detrimental Activity***" means, except as otherwise provided in an Award Agreement, any one or more of the following activities in which the Committee determines in its sole and absolute discretion that an employee has engaged without the written consent of the Company: (i) breach or violation of any employment-related agreement between the employee and the Company or any Subsidiary; (ii) breach or violation of any other written agreement or release of claims between the employee and the Company or any Subsidiary; (iii) violation of a written policy of the Company or any Subsidiary which violation is determined by the Committee in its sole discretion to be detrimental to the Company or any Subsidiary; (iv) improper use or disclosure, either during or subsequent to the employee's employment with the Company or any Subsidiary, of any proprietary or confidential information of the Company or any Subsidiary; (v) conviction of, or entering a guilty plea with respect to, any felony crime, whether or not connected with the Company or any Subsidiary; (vi) entering into employment or a consulting relationship with a competitor of the Company or any Subsidiary under circumstances suggesting that such employee will be using unique or special knowledge gained as an employee of the Company or any Subsidiary to compete with the Company or any Subsidiary; (vii) solicitation or attempted solicitation of employees from the Company or any Subsidiary; (viii) use of information obtained during the course of the employee's employment with the Company or any Subsidiary for the employee's own purposes, such as for the solicitation of business; (ix) engaging in either gross misconduct or criminal activity harmful to the Company or any Subsidiary; or (x) any other action that materially harms the business interests, reputation, or goodwill of the Company or any Subsidiary of the Company.

(i) "***Effective Date***" means February 24, 2020.

(j) "***Eligible Person***" means all officers and employees of the Company or of any of its Subsidiaries, and other persons who provide services to the Company or any of its Subsidiaries, including directors of the Company. An employee on leave of absence may be considered as still in the employ of the Company or its Subsidiaries for purposes of eligibility for participation in this Plan.

(k) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended from time to time, including rules thereunder and successor provisions and rules thereto.

(l) "***Fair Market Value***" means, as of any specified date, (i) if the Stock is listed on a national securities exchange, the closing sales price of the Stock, as reported on the stock exchange composite tape on that date (or if no sales occur on that date, on the last preceding date on which such sales of the Stock are so reported); (ii) if the Stock is not traded on a national securities exchange but is traded over the counter at the time a determination of its fair market value is required to be made under the Plan, the average between the reported high and low bid and asked prices of Stock on the most recent date on which Stock was publicly traded; or (iii) in the event Stock is not publicly traded at the time a determination of its value is required to be made under the Plan, the amount determined by the Committee in its discretion in such manner as it deems appropriate, taking into account all factors the Committee deems appropriate including, without limitation, the Nonqualified Deferred Compensation Rules.

(m) "***Incentive Stock Option***" or "***ISO***" means any Option intended to be and designated as an incentive stock option within the meaning of section 422 of the Code or any successor provision thereto.

(n) "***Nonqualified Deferred Compensation Rules***" means the limitations or requirements of section 409A of the Code, as amended from time to time, including the guidance and regulations promulgated thereunder and successor provisions, guidance and regulations thereto.

(o) "***Nonstatutory Stock Option***" means any Option that is not intended to be an "incentive stock option" within the meaning of section 422 of the Code.

(p) "***Option***" means a right, granted to an Eligible Person under Section 6(b) hereof, to purchase Stock or other Awards at a specified price during specified time periods.

(q) "***Participant***" means a person who has been granted an Award under this Plan that remains outstanding, including a person who is no longer an Eligible Person.

(r) "***Person***" means any person or entity of any nature whatsoever, specifically including an individual, a firm, a company, a corporation, a partnership, a limited liability company, a trust or other entity; a Person, together with that Person's Affiliates and Associates (as those terms are defined in Rule 12b-2 under the Exchange Act, provided that "registrant" as used in Rule 12b-2 shall mean the Company), and any Persons acting as a partnership, limited partnership, joint venture, association, syndicate or other group (whether or not formally organized), or otherwise acting jointly or in concert or in a coordinated or consciously parallel manner (whether or not pursuant to any express agreement), for the purpose of acquiring, holding, voting or disposing of securities of the Company with such Person, shall be deemed a single "Person."

(s) "***Qualifying Public Offering***" means a firm commitment underwritten public offering of Stock for cash where the shares of Stock registered under the Securities Act are listed on a national securities exchange.

(t) "***Restricted Stock***" means Stock granted to an Eligible Person under Section 6(c) hereof, that is subject to certain restrictions and to a risk of forfeiture.

(u) "***Securities Act***" means the Securities Act of 1933 and the rules and regulations promulgated thereunder, or any successor law, as it may be amended from time to time.

(v) "***Stock***" means the Company's Common Stock, par value $0.001 per share, and such other securities as may be substituted (or re-substituted) for Stock pursuant to Section 8.

(w) "***Subsidiary***" means with respect to the Company, any corporation or other entity of which a majority of the voting power of the voting equity securities or equity interest is owned, directly or indirectly, by the Company.

(x) "***Substitute Award***" means an Award granted under Section 6(d) hereof in substitution for a similar award as a result of certain business transactions.

3. **Administration**.

(a) Authority of the Committee. The Plan shall be administered by the Committee except to the extent the Board elects to administer the Plan, in which case references herein to the "Committee" shall be deemed to include references to the "Board." The Committee shall have the authority, in its sole and absolute discretion exercised consistent with the terms of the Plan, to: (i) designate Eligible Persons as Participants; (ii) determine the type or types of Awards to be granted to an Eligible Person; (iii) determine the number of shares of Stock or amount of cash to be covered by Awards; (iv) determine the terms and conditions of any Award, consistent with the terms of the Plan, as well as the modification of such terms, which may include the acceleration of vesting, waiver of forfeiture restrictions, modification of the form of settlement of the Award (for example, from cash to Stock or vice versa), or modification of any other condition or limitation regarding an Award, based on such factors as the Committee shall determine, in its sole discretion; (v) determine whether, to what extent, and under what circumstances Awards may be vested, settled, exercised, canceled, or forfeited; (vi) interpret and administer the Plan and any instrument or agreement relating to an Award made under the Plan; (vii) establish, amend, suspend, or waive rules and regulations used to administer the Plan; and (viii) make any other determination and take any other action that the Committee deems necessary or desirable for the administration of the Plan. Subject to the Nonqualified Deferred Compensation Rules, the Committee may correct any defect, supply any omission, or reconcile any inconsistency in the Plan, in any Award, or in any Award Agreement in the manner and to the extent it deems necessary or desirable to carry the Plan or any such Award or Award Agreement, or any term thereof, into effect, and the Committee shall be the sole and final judge of that necessity or desirability. Notwithstanding the foregoing, the Committee shall not have any discretion to (A) accelerate the payment of any Award that provides for a deferral of compensation under the Nonqualified Deferred Compensation Rules if such acceleration would subject a Participant to additional taxes under the Nonqualified Deferred Compensation Rules, or (B) take any action that would violate any applicable law. The express grant of any specific power to the Committee, and the taking of any action by the Committee, shall not be construed as limiting any power or authority of the Committee. The determinations of the Committee on the matters referred to in this Section 3(a) shall be final and conclusive.

(b) Manner of Exercise of Committee Authority. Any action of the Committee shall be final, conclusive and binding on all Persons, including the Company, its Subsidiaries, stockholders, Participants, beneficiaries, and transferees under Section 7(a)(iii) and (iv) hereof or other Persons claiming rights from or through a Participant. For the avoidance of doubt, the full Board may take any action relating to an Award granted or to be granted to an Eligible Person.

(c) Delegation of Authority. The Committee may delegate any or all of its powers and duties under the Plan to any officer of the Company that is also a member of the Board (in their capacity as a member of the Board), subject to such terms as the Committee shall determine, to perform such functions, including administrative functions and the power to grant Awards under the Plan, as the Committee may determine, to the extent that such delegation will not violate state or corporate law. Upon any such delegation, all references in the Plan to the "Committee," other than in Section 8, shall be deemed to include any officer of the Company to whom such powers have been delegated by the Committee. Any such delegation shall not limit such officer's right to receive Awards under the Plan; provided, however, the officer may not grant Awards to himself or herself or take any action with respect to any Award previously granted to himself or herself, a member of the Board, or an individual who is an executive officer of the Company or an Affiliate. The Committee may also appoint agents to assist it in administering the Plan that are employees (whether or not officers) of the Company, provided that such individuals may not be delegated the authority to grant or modify any Awards that will, or may, be settled in Stock.

(d) Limitation of Liability. The Committee and each member thereof shall be entitled to, in good faith, rely or act upon any report or other information furnished to him or her by any officer or employee of the Company or any of its Subsidiaries, the Company's legal counsel, independent auditors, consultants or any other agents assisting in the administration of this Plan. Members of the Committee and any officer or employee of the Company or any of its Subsidiaries acting at the direction or on behalf of the Committee shall not be personally liable for any action or determination taken or made in good faith with respect to this Plan, and shall, to the fullest extent permitted by law, be indemnified and held harmless by the Company with respect to any such action or determination.

(e) Participants in Non-U.S. Jurisdictions. Notwithstanding any provision of the Plan to the contrary, to comply with applicable laws in countries other than the United States in which the Company or any of its Affiliates operates or has employees, directors or other service providers from time to time, or to ensure that the Company complies with any applicable requirements of foreign securities exchanges, the Committee, in its sole discretion, shall have the power and authority to: (i) determine which of its Affiliates shall be covered by the Plan; (ii) determine which Eligible Persons outside the United States are eligible to participate in the Plan; (iii) modify the terms and conditions of any Award granted to Eligible Persons outside the United States to comply with applicable foreign laws or listing requirements of any foreign exchange; (iv) establish sub-plans and modify exercise procedures and other terms and procedures, to the extent such actions may be necessary or advisable (any such sub-plans and/or modifications shall be attached to the Plan as appendices), provided, however, that no such sub-plans and/or modifications shall increase the share limitations contained in Section 4(a); and (v) take any action, before or after an Award is granted, that it deems advisable to comply with any applicable governmental regulatory exemptions or approval or listing requirements of any such foreign securities exchange. For purposes of the Plan, all references to foreign laws, rules, regulations or taxes shall be references to the laws, rules, regulations and taxes of any applicable jurisdiction other than the United States or a political subdivision thereof.

4. **Stock Subject to Plan**.

(a) Overall Number of Shares Available for Delivery. Subject to adjustment in a manner consistent with any adjustment made pursuant to Section 8, the total number of shares of Stock reserved and available for issuance in connection with Awards under this Plan shall not exceed 819,768 shares, and such total will be available for the issuance of Incentive Stock Options.

(b) Application of Limitation to Grants of Awards. Subject to Section 4(c), no Award may be granted if the number of shares of Stock to be delivered in connection with such Award exceeds the number of shares of Stock remaining available under this Plan minus the number of shares of Stock issuable in settlement of or relating to then-outstanding Awards. The Committee may adopt reasonable counting procedures to ensure appropriate counting, avoid double counting (as, for example, in the case of tandem or Substitute Awards) and make adjustments if the number of shares of Stock actually delivered differs from the number of shares previously counted in connection with an Award.

(c) Availability of Shares Not Issued under Awards. Shares of Stock subject to an Award under this Plan that expires or is canceled, forfeited, exchanged, settled in cash or otherwise terminated, including (i) shares forfeited with respect to Restricted Stock, and (ii) the number of shares withheld or surrendered to the Company in payment of any exercise or purchase price of an Award or taxes relating to Awards, will again be available for Awards under this Plan, except that if any such shares could not again be available for Awards to a particular Participant under any applicable law or regulation, such shares shall be available exclusively for Awards to Participants who are not subject to such limitation.

(d) Stock Offered. The shares of Stock to be delivered under the Plan shall be made available from (i) authorized but unissued shares of Stock, (ii) Stock held in the treasury of the Company, or (iii) previously issued shares of Stock reacquired by the Company, including shares purchased on the open market.

5. **Eligibility**. Awards may be granted under this Plan only to Persons who are Eligible Persons at the time of grant thereof.

6. **Specific Terms of Awards**.

(a) General and Vesting. Awards may be granted on the terms and conditions set forth in this Section 6. Awards granted under this Plan may, in the discretion of the Committee, be granted either alone, in addition to, or in tandem with any other Award. In addition, the Committee may impose on any Award or the exercise thereof, at the date of grant or thereafter (subject to Section 8(a)), such additional terms and conditions, not inconsistent with the provisions of this Plan, as the Committee shall determine. Notwithstanding any other term of this Plan to the contrary, Awards granted under the Plan will become vested and nonforfeitable, subject to the continued performance of services by the Participant to the Company or its Subsidiaries, with respect to 25% of the Award on the first anniversary of the date of grant of the award and with respect to $1/48^{th}$ of the Award in each month occurring thereafter.

(b) Options. The Committee is authorized to grant Options, which may be designated as either ISOs or Nonstatutory Stock Options, to Eligible Persons on the following terms and conditions:

(i) Exercise Price. Each Award Agreement evidencing an Option shall state the exercise price per share of Stock (the "***Exercise Price***"); provided, however, that except as provided in Section 6(d) or in Section 8 hereof, the Exercise Price of an Option shall not be less than the greater of (A) the par value per share of the Stock or (B) 100% of the Fair Market Value per share of the Stock as of the date of grant of the Option (or in the case of an ISO granted to an individual who owns stock possessing more than 10% of the total combined voting power of all classes of stock of the Company or its parent or any Subsidiary, 110% of the Fair Market Value per share of the Stock on the date of grant). Except as otherwise provided in Section 6(d), in the event an Option is granted with an Exercise Price less than 100% of the Fair Market Value per share of the Stock as of the date of grant of the Option, the Exercise Price of such Option shall be deemed to be 100% of the Fair Market Value per share of the Stock as of the date of grant of the Option.

(ii) Time and Method of Exercise. The Committee shall determine the time or times at which or the circumstances under which an Option may be exercised in whole or in part (including based on achievement of performance goals and/or future service requirements), the methods by which such Exercise Price may be paid or deemed to be paid, the form of such payment, including without limitation, cash or cash equivalents, Stock (including previously owned shares or through a cashless or broker-assisted exercise or other reduction of the amount of shares otherwise issuable pursuant to the Option), other Awards or awards granted under other plans of the Company or any Subsidiary, other property, or any other legal consideration the Committee deems appropriate (including notes or other contractual obligations of Participants to make payment on a deferred basis), and the methods by or forms in which Stock will be delivered or deemed to be delivered to Participants, including, but not limited to, the delivery of Restricted Stock subject to Section 6(c). In the case of an exercise whereby the Exercise Price is paid with Stock, such Stock shall be valued as of the date of exercise. No Option may be exercisable for a period of more than ten (10) years following the date of grant of the Option (or in the case of an ISO granted to an individual who owns stock possessing more than 10% of the total combined voting power of all classes of stock of the Company or its parent or any Subsidiary, for a period of no more than five (5) years following the date of grant of the ISO). Notwithstanding the foregoing, upon the occurrence of Detrimental Activity the unexercised portion of any outstanding Option held by a Participant determined to have engaged in such Detrimental Activity will immediately terminate.

(iii) ISOs. The terms of any ISO granted under this Plan shall comply in all respects with the provisions of section 422 of the Code. ISOs may only be granted to Eligible Persons who are employees of the Company or employees of a parent or Subsidiary corporation of the Company. Except as otherwise provided in Section 8, no term of this Plan relating to ISOs shall be interpreted, amended or altered, nor shall any discretion or authority granted under this Plan be exercised, so as to disqualify either this Plan or any ISO under section 422 of the Code, unless the Participant has first requested the change that will result in such disqualification. ISOs shall not be granted more than ten years after the earlier of the adoption of this Plan or the approval of this Plan by the Company's stockholders. Notwithstanding the foregoing, the Fair Market Value of shares of Stock subject to an ISO and the aggregate Fair Market Value of shares of stock of any parent or subsidiary corporation (within the meaning of sections 424(e) and (f) of the Code) subject to any other ISO (within the meaning of section 422 of the Code) of the Company or a parent or subsidiary corporation (within the meaning of sections 424(e) and (f) of the Code) that first becomes purchasable by a Participant in any calendar year may not (with respect to that Participant) exceed $100,000, or such other amount as may be prescribed under section 422 of the Code or applicable regulations or rulings from time to time. As used in the previous sentence, Fair Market Value shall be determined as of the date the ISOs are granted. Failure to comply with this provision shall not impair the enforceability or exercisability of any Option, but shall cause the excess amount of shares to be reclassified in accordance with the Code.

(c) Restricted Stock. The Committee is authorized to grant Restricted Stock to Eligible Persons on the following terms and conditions. The purchase price for an award of Restricted Stock will be 100% of the Fair Market Value per share of the Stock as of the date of grant of the right to purchase the Restricted Stock.

(i) Grant and Restrictions. Restricted Stock shall be subject to such restrictions on transferability, risk of forfeiture and other restrictions, if any, as the Committee may impose, which restrictions may lapse separately or in combination at such times, under such circumstances (including based on achievement of performance goals and/or future service requirements), in such installments or otherwise, as the Committee may determine at the date of grant or thereafter. During the restricted period applicable to the Restricted Stock, the Restricted Stock may not be sold, transferred, pledged, hypothecated, margined or otherwise encumbered by the Participant.

(ii) Dividends and Splits. As a condition to the grant of an Award of Restricted Stock, the Committee may allow a Participant to elect, or may require, that any cash dividends paid on a share of Restricted Stock be automatically reinvested in additional shares of Restricted Stock, applied to the purchase of additional Awards under this Plan or deferred without interest to the date of vesting of the associated Award of Restricted Stock; provided, that, to the extent applicable, any such election is intended to comply with the Nonqualified Deferred Compensation Rules. Unless otherwise determined by the Committee and specified in the applicable Award Agreement, Stock distributed in connection with a Stock split or Stock dividend, and other property (other than cash) distributed as a dividend, shall be subject to restrictions and a risk of forfeiture to the same extent as the Restricted Stock with respect to which such Stock or other property has been distributed.

(d) Substitute Awards. Awards may be granted in substitution or exchange for any other Award granted under the Plan or under another plan of the Company or any other right of an Eligible Person to receive payment from the Company. Awards may be also be granted under the Plan in substitution for similar awards held by individuals who become Eligible Persons as a result of a merger, consolidation or acquisition of another entity or the assets of another entity by or with the Company or an Affiliate of the Company. Such Substitute Awards referred to in the immediately preceding sentence that are Options or Stock Appreciation Rights may have an exercise price that is less than the Fair Market Value of a share of Stock on the date of the substitution if such substitution complies with the Nonqualified Deferred Compensation Rules and other applicable laws and exchange rules.

7. **Certain Provisions Applicable to Awards**.

(a) Limit on Transfer of Awards and Stock Issued under the Plan.

(i) Except as provided in Section 7(a)(iii) and (iv) below, each Option shall be exercisable only by the Participant during the Participant's lifetime, or by the Person to whom the Participant's rights shall pass by will or the laws of descent and distribution. Notwithstanding the foregoing, an ISO shall not be transferable other than by will or the laws of descent and distribution.

(ii) Except as provided in Section 7(a)(iii) and (iv) below, no Award, Stock issued and the Plan or any right under any Award may be assigned, alienated, pledged, attached, sold or otherwise transferred or encumbered by a Participant and any such purported assignment, alienation, pledge, attachment, sale, transfer or encumbrance shall be void and unenforceable against the Company or any Affiliate.

(iii) To the extent specifically provided by the Committee, an Award and/or any Stock issued pursuant to the Plan may be transferred by a Participant without consideration to immediate family members or related family trusts, limited partnerships or similar entities or on such terms and conditions as the Committee may from time to time establish.

(iv) An Award and/or any Stock issued pursuant to the Plan may be transferred pursuant to a domestic relations order entered or approved by a court of competent jurisdiction upon delivery to the Company of a written request for such transfer and a certified copy of such order.

(b) Form and Timing of Payment under Awards; Deferrals. Subject to the terms of this Plan and any applicable Award Agreement, payments to be made by the Company or any of its Subsidiaries upon the exercise or settlement of an Award may be made in such forms as the Committee shall determine in its discretion, including without limitation cash, Stock, other Awards or other property, and may be made in a single payment or transfer, in installments, or on a deferred basis (which may be required by the Committee or permitted at the election of the Participant on terms and conditions established by the Committee); provided, however, that any such deferred or installment payments will be set forth in the Award Agreement and/or otherwise made in a manner that will not result in additional taxes under the Nonqualified Deferred Compensation Rules. Payments may include, without limitation, provisions for the payment or crediting of reasonable interest on installment or deferred payments or the grant or crediting of Dividend Equivalents or other amounts in respect of installment or deferred payments denominated in Stock. This Plan shall not constitute an "employee benefit plan" for purposes of section 3(3) of the Employee Retirement Income Security Act of 1974, as amended.

(c) Evidencing Stock. The Stock or other securities of the Company delivered pursuant to an Award may be evidenced in any manner deemed appropriate by the Committee in its sole discretion, including, but not limited to, in the form of a certificate issued in the name of the Participant or by book entry, electronic or otherwise and shall be subject to such stop transfer orders and other restrictions as the Committee may deem advisable under the Plan or the rules, regulations, and other requirements of the Securities and Exchange Commission, any stock exchange upon which such Stock or other securities are then listed, and any applicable federal, state or other laws, and the Committee may cause a legend or legends to be inscribed on any such certificates to make appropriate reference to such restrictions. If certificates representing Restricted Stock are registered in the name of the Participant, the Committee may require that such certificates bear an appropriate legend referring to the terms, conditions and restrictions applicable to such Restricted Stock, that the Company retain physical possession of the certificates, and that the Participant deliver a stock power to the Company, endorsed in blank, related to the Restricted Stock

(d) Consideration for Grants. Awards may be granted for such consideration, including services, as the Committee shall determine consistent with the terms of the Plan, but shall not be granted for less than the minimum lawful consideration.

(e) Additional Agreements. Each Eligible Person to whom an Award is granted under this Plan may be required to agree in writing, as a condition to the grant of such Award or otherwise, to subject an Award that is exercised or settled following such Eligible Person's termination of employment or service to a general release of claims and/or a noncompetition or other restricted covenant agreement in favor of the Company and its Affiliates, with the terms and conditions of such agreement(s) to be determined in good faith by the Committee.

(f) Termination of Service. Except as provided herein, the treatment of an Award upon a termination of employment or any other service relationship by and between a Participant and the Company or any Affiliate shall be specified in the applicable Award Agreement.

8. **Amendment; Subdivision or Consolidation; Recapitalization; Change of Control; Reorganization**.

(a) Amendments to the Plan and Awards. The Board may amend, alter, suspend, discontinue or terminate this Plan or the Committee's authority to grant Awards under this Plan without the consent of stockholders or Participants, except that any amendment or alteration to this Plan, including any increase in any share limitation, shall be subject to the approval of the Company's stockholders not later than the annual meeting next following such Board action if such stockholder approval is required by any federal or state law or regulation or the rules of any stock exchange or automated quotation system on which the Stock may then be listed or quoted, and the Board may otherwise, in its discretion, determine to submit other such changes to this Plan to stockholders for approval; provided, that, without the consent of an affected Participant, no such Board action may materially and adversely affect the rights of such Participant under any previously granted and outstanding Award. The Committee may waive any conditions or rights under, or amend, alter, suspend, discontinue or terminate any Award theretofore granted and any Award Agreement relating thereto, except as otherwise provided in this Plan; provided, however, that, without the consent of an affected Participant, no such Committee action may materially and adversely affect the rights of such Participant under such Award. For purposes of clarity, any adjustments made to Awards pursuant to Section 8(b) through 8(h) will be deemed *not* to materially and adversely affect the rights of any Participant under any previously granted and outstanding Award and therefore may be made without the consent of affected Participants.

(b) Existence of Plans and Awards. The existence of this Plan and the Awards granted hereunder shall not affect in any way the right or power of the Company, the Board or the stockholders of the Company to make or authorize any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, any merger or consolidation of the Company, any issue of debt or equity securities ahead of or affecting Stock or the rights thereof, the dissolution or liquidation of the Company or any sale, lease, exchange or other disposition of all or any part of its assets or business or any other corporate act or proceeding. In no event will any action taken by the Committee pursuant to this Section 8 result in the creation of deferred compensation within the meaning of the Nonqualified Deferred Compensation Rules.

(c) Subdivision or Consolidation of Shares. The terms of an Award and the share limitations under the Plan shall be subject to adjustment by the Committee from time to time, in accordance with the following provisions:

(i) If at any time, or from time to time, the Company shall subdivide as a whole (by reclassification, by a Stock split, by the issuance of a distribution on Stock payable in Stock, or otherwise) the number of shares of Stock then outstanding into a greater number of shares of Stock or in the event the Company distributes an extraordinary cash dividend, then, as appropriate (A) the maximum number of shares of Stock available for the Plan or in connection with Awards as provided in Sections 4 and 5 shall be increased proportionately (or as appropriate to reflect an extraordinary cash dividend), and the kind of shares or other securities available for the Plan shall be appropriately adjusted, (B) the number of shares of Stock (or other kind of shares or securities) that may be acquired under any then outstanding Award shall be increased proportionately, and (C) the price (including the Exercise Price or grant price) for each share of Stock (or other kind of shares or securities) subject to then outstanding Awards shall be reduced proportionately, without changing the aggregate purchase price or value as to which outstanding Awards remain exercisable or subject to restrictions.

(ii) If at any time, or from time to time, the Company shall consolidate as a whole (by reclassification, by reverse Stock split, or otherwise) the number of shares of Stock then outstanding into a lesser number of shares of Stock, then, as appropriate (A) the maximum number of shares of Stock available for the Plan or in connection with Awards as provided in Sections 4 and 5 shall be decreased proportionately, and the kind of shares or other securities available for the Plan shall be appropriately adjusted, (B) the number of shares of Stock (or other kind of shares or securities) that may be acquired under any then outstanding Award shall be decreased proportionately, and (C) the price (including the exercise price) for each share of Stock (or other kind of shares or securities) subject to then outstanding Awards shall be increased proportionately, without changing the aggregate purchase price or value as to which outstanding Awards remain exercisable or subject to restrictions.

(iii) Whenever the number of shares of Stock subject to outstanding Awards and the price for each share of Stock subject to outstanding Awards are required to be adjusted as provided in this Section 8(c), the Committee shall promptly prepare a notice setting forth, in reasonable detail, the event requiring adjustment, the amount of the adjustment, the method by which such adjustment was calculated, and the change in price and the number of shares of Stock, other securities, cash, or property purchasable subject to each Award after giving effect to the adjustments. The Committee shall promptly provide each affected Participant with such notice.

(d) Recapitalization. If the Company recapitalizes, reclassifies its capital stock, or otherwise changes its capital structure (a "***recapitalization***") without the occurrence of a Change of Control, the number and class of shares of Stock covered by an Award theretofore granted shall be adjusted so that such Award shall thereafter cover the number and class of shares of Stock and securities to which the holder would have been entitled pursuant to the terms of the recapitalization if, immediately prior to the recapitalization, the holder had been the holder of record of the number of shares of Stock then covered by such Award and the share limitations provided in Sections 4 and 5 shall be adjusted in a manner consistent with the recapitalization.

(e) Additional Issuances. Except as expressly provided herein, the issuance by the Company of shares of stock of any class or securities convertible into shares of stock of any class, for cash, property, labor or services, upon direct sale, upon the exercise of rights or warrants to subscribe therefor, or upon conversion of shares or obligations of the Company convertible into such shares or other securities, and in any case whether or not for fair value, shall not affect, and no adjustment by reason thereof shall be made with respect to, the number of shares of Stock subject to Awards theretofore granted or the purchase price per share of Stock, if applicable.

(f) Change of Control and Other Events. Notwithstanding any other provisions of the Plan or an Award Agreement to the contrary, upon a Change of Control or changes in the outstanding Stock by reason of a recapitalization, reorganization, merger, consolidation, combination, exchange or other relevant change in capitalization occurring after the date of the grant of any Award and not otherwise provided for by this Section 8, the Committee, acting in its sole discretion without the consent or approval of any holder, may effect one or more of the following alternatives, which may vary among individual holders and which may vary among Options or other Awards held by any individual holder: (i) remove any applicable forfeiture restrictions on any Award; (ii) accelerate the time of exercisability of an Award so that such Award may be exercised in full or in part for a limited period of time on or before a date specified by the Committee, before or after such Change of Control, after which specified date all unexercised Awards and all rights of holders thereunder shall terminate; (iii) provide for a cash payment with respect to outstanding Awards by requiring the mandatory surrender to the Company by selected holders of some or all of the outstanding Awards held by such holders (irrespective of whether such Awards are then vested or exercisable pursuant to the Plan) as of a date, before or after such Change of Control, specified by the Committee, in which event the Committee shall thereupon cancel such Awards (with respect to all shares subject to such Awards) and pay to each holder an amount of cash (or other consideration including securities or other property) per Award equal to the Change of Control Price (as defined below), less the Exercise Price with respect to an Option; provided, however, that to the extent the exercise price of an Option exceeds the Change of Control Price, such award may be canceled for no consideration; (iv) cancel Awards that are unexercisable or remain subject to a restricted period as of the date of a Change of Control without payment of any consideration to the Participant for such Awards; or (v) make such adjustments to Awards then outstanding as the Committee deems appropriate to reflect such Change of Control (including, but not limited to, (x) the substitution, assumption, or continuation of Awards by the successor company or a parent or subsidiary thereof for new awards, and (y) the adjustment as to the number and price of shares of Stock or other consideration subject to such Awards); provided, however, that the Committee may determine in its sole discretion that no adjustment is necessary to Awards then outstanding.

(g) Change of Control Price. The "***Change of Control Price***" shall equal the amount determined in the following clause (i), (ii), (iii), (iv) or (v), whichever is applicable, as follows: (i) the price per share offered to holders of Stock in any merger or consolidation, (ii) the per share Fair Market Value of the Stock immediately before the Change of Control without regard to assets sold in the Change of Control and assuming the Company has received the consideration paid for the assets in the case of a sale of the assets, (iii) the amount distributed per share of Stock in a dissolution transaction, (iv) the price per share offered to holders of Stock in any tender offer or exchange offer whereby a Change of Control takes place, or (v) if such Change of Control occurs other than pursuant to a transaction described in clauses (i), (ii), (iii), or (iv) of this Section 8(g), the Fair Market Value per share of the Stock that may otherwise be obtained with respect to such Awards or to which such Awards track, as determined by the Committee as of the date determined by the Committee to be the date of cancellation and surrender of such Awards. In the event that the consideration offered to stockholders of the Company in any transaction described in this Section 8(g) or in Section 8(f) consists of anything other than cash, the Committee shall determine the fair cash equivalent of the portion of the consideration offered which is other than cash and such determination shall be binding on all affected Participants to the extent applicable to Awards held by such Participants.

9. **General Provisions**.

(a) Restricted Securities. Prior to a Qualifying Public Offering, the Stock to be issued under this Plan, which may be issued in reliance on the exemption from registration set forth in Rule 701, shall be deemed to be "restricted securities" as defined in Rule 144, promulgated by the Securities and Exchange Commission under the Securities Act as from time to time in effect and applicable to the Plan and Participants. Resales of such Stock by the holder thereof shall be in compliance with the Securities Act or an exemption therefrom. Such Stock may bear a legend if determined necessary by the Committee in substantially the following form:

> "THE SHARES OF STOCK REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY STATE SECURITIES LAWS. THE SHARES MAY NOT BE OFFERED FOR SALE, SOLD, PLEDGED, TRANSFERRED, OR OTHERWISE DISPOSED OF UNTIL THE HOLDER HEREOF PROVIDES EVIDENCE SATISFACTORY TO IMMUNEERING CORPORATION (WHICH, IN THE DISCRETION OF IMMUNEERING CORPORATION, MAY INCLUDE AN OPINION OF COUNSEL SATISFACTORY TO IMMUNEERING CORPORATION) THAT SUCH OFFER, SALE, PLEDGE, TRANSFER, OR OTHER DISPOSITION WILL NOT VIOLATE APPLICABLE FEDERAL OR STATE LAWS."

(b) Right of First Refusal. If any Participant ("***Transferor***"), regardless of whether such Participant is the original holder of the Award contemplated in this Section 9(b), proposes to sell, transfer, assign, hypothecate, make gifts of or in any manner dispose of, encumber, or alienate (each individually constituting a "***Transfer***") to a transferee, any Stock, obtained in connection with any Award held by such Transferor, either pursuant to a bona fide offer ("***Offer***") from a potential transferee ("***Offeror***") or by effecting a gift of the Stock ("***Gift***") to a donee ("***Donee***") without consideration, then the Transferor must comply with the provisions of this Section 9(b), including, without limitation, acknowledging and allowing the applicable time periods to lapse with respect to the rights of the Company as provided herein, before accepting any such Offer or otherwise affecting the Transfer of any Stock pursuant to such Offer, or affecting any such Gift.

(i) Statement of Offer. Before accepting any Offer or affecting any Gift, the Transferor shall obtain from the Offeror or Donee, as the case may be, a statement ("***Statement***") in writing addressed to the Transferor and signed by the Offeror or Donee, setting forth: (A) the date of the Statement (the "***Statement Date***"); (B) the number of shares of Stock covered by the Offer or Gift and, in the case of an Offer, the price per share to be paid by the Offeror and the terms of payment of such price; (C) the Offeror's or Donee's willingness to be bound by the terms of this Section 9(b) and execute and deliver to the Company such documentation as required under this Section 9(b); (D) the Offeror's or Donee's name, address and telephone number; and (E) the Offeror's or Donee's willingness to supply any additional information about himself or herself as may be reasonably requested by the Company. Promptly upon receipt of a Statement, and before accepting the Offer or affecting the Gift to which the Statement relates, the Transferor shall deliver to the Company (1) a copy of the Statement, and (2) in the case of an Offer, evidence reasonably satisfactory to the Company as to the Offeror's financial ability to consummate the proposed purchase.

(ii) Company Rights. Subject to the provisions of Section 9(b)(i), upon receipt of a copy of the Statement, the Company shall have the exclusive right and option (the "***Right***"), but not the obligation, to purchase all of the shares of Stock that the Offeror proposes to purchase from the Transferor or, in the case of a Gift, that the Transferor proposes to give to the Donee (collectively, "***Subject Securities***") (A) in the case of an Offer, for the per share price and on the terms as set forth in the Statement; provided, however, that if the purchase price is payable in whole or in part in property (which term shall include the securities of any issuer other than the Company) other than cash, the Company may pay, in lieu of such property, a sum of cash equal to the fair market value of such property as determined by the Transferor and the Company in good faith or, if the Transferor and the Company do not agree on the fair market value of such property within five days after the Company delivers written notice (as described below) of its intention to exercise the Right, then the Transferor and the Company shall select one independent appraiser (with each of the Transferor and the Company jointly bearing one-half of the expense of the appraiser) to determine the fair market value of that property and the appraised fair market value of that property as determined by such appraiser shall be deemed the fair market value of that property for purposes of this Section 9(b)(ii); or (B) in the case of a Gift, the Fair Market Value of the Subject Securities, as determined in good faith by the Company; provided that the Transferor may elect to retain the Subject Securities rather than sell the Subject Securities at the Fair Market Value as determined by the Company by giving written notice thereof to the Company within five days after such determination by the Company is received in writing by the Transferor. The Company shall exercise the Right by giving written notice thereof to the Transferor. Upon exercising the Right, the Company shall have the obligation, to the extent it lawfully may do so, to purchase the Subject Securities within 30 days after the date of the Company's receipt of its copy of the Statement on and subject to the terms and conditions hereof. If the terms of the purchase include the Transferor's release of any pledge or encumbrance on the Subject Securities and the Transferor shall have failed to obtain the release of the pledge or encumbrance by the purchase date, at the Company's option the purchase shall occur on the scheduled date with the purchase price reduced to the extent of all unpaid indebtedness for which the Subject Securities are then pledged or encumbered. Failure by the Company to exercise the Right, or failure by the Company to otherwise perform its obligations under this Section 9(b)(ii), within the 30 day period herein prescribed shall be deemed an election by the Company not to exercise the Right. If the Company exercises the Right and is unable for any reason to perform its obligations thereunder in accordance with this Section 9(b), the Company may assign all or a portion of its rights under the Right to any one or more of the Company's stockholders (other than the Transferor) ("***Assignee Stockholder***"), as the Board shall determine, in its sole and absolute discretion.

(iii) Purchase of Less Than All Shares. Anything in Section 9(b) to the contrary notwithstanding, the Company and any Assignee Stockholder individually may, pursuant to the exercise of the Right, purchase fewer than all of the Subject Securities provided that such Persons in the aggregate purchase all, and not less than all, of the Subject Securities, and it shall be a condition precedent to the obligation of any of such Persons to purchase any Subject Securities, that all, and not less than all, of the Subject Securities have been elected to be purchased pursuant to the exercise of the Right.

(iv) Failure to Exercise Right or Consummate Transaction. If the Company elects not to exercise the Right, or if the Right is exercised and the obligations to be performed thereunder by the Company are not performed in accordance with this Section 9(b), or if the Company's rights are assigned to an Assignee Stockholder and such Assignee Stockholder fails to perform his or her obligations under the assigned Right in accordance with this Section 9(b), then, subject to the application of any applicable state or federal securities laws, the Transferor may dispose of all of the Subject Securities within 90 days after the date of the Statement at the per share price and on the terms, if any, as set forth in the Statement free and clear of the terms of this Section 9(b); provided, however, that (A) any subsequent transfer by the Offeror or Donee, as applicable, shall once again be subject to this Section 9(b) and (B) if the sale or gift of the Subject Securities is not consummated within such 90-day period, then the Transfer of any such Stock shall once again be subject to the terms of this Section 9(b).

(v) Legend. To assure the enforceability of the Company's rights under this Section 9(b), until the date of a Qualifying Public Offering, each certificate or instrument representing Stock or an Award held by him, her, or it may, in the Committee's discretion, bear a conspicuous legend in substantially the following form:

> "THE SHARES [REPRESENTED BY THIS CERTIFICATE] [ISSUABLE PURSUANT TO THIS AGREEMENT] ARE SUBJECT TO THE COMPANY'S RIGHT OF FIRST REFUSAL IN THE CASE OF A TRANSFER AS PROVIDED UNDER THE IMMUNEERING CORPORATION LONG TERM INCENTIVE PLAN AND/OR AN AWARD AGREEMENT ENTERED INTO PURSUANT THERETO. COPIES OF SUCH PLAN AND AWARD AGREEMENT ARE AVAILABLE UPON WRITTEN REQUEST TO THE COMPANY AT ITS PRINCIPAL EXECUTIVE OFFICES."

(vi) Expiration. The rights and obligations pursuant to this Section 9(b) hereof will terminate upon the date of a Qualifying Public Offering.

(c) Purchase Option.

(i) Company Rights. Except as otherwise expressly provided in any particular Award, (A) if a Participant ceases to be employed by or perform services for the Company or its Subsidiaries for any reason at any time, (B) upon the occurrence of Detrimental Activity by a Participant, or (C) upon the occurrence of a Change in Control, the Company (and/or its designee(s)) shall have the option (the "***Purchase Option***") to purchase, and the Participant (or the Participant's executor or the administrator of the Participant's estate in the event of the Participant's death, or the transferee of the Stock or Award in the case of any disposition, or the Participant's legal representative in the event of the Participant's incapacity) (hereinafter, collectively with such Participant, the "***Grantor***") shall sell to the Company and/or its designee(s), all or any portion (at the Company's option) of the shares of Stock issued pursuant to this Plan and held by the Grantor (such shares of Stock herein referred to as the "***Purchasable Shares***").

(ii) Notice. The Company shall give notice in writing to the Grantor of the exercise of the Purchase Option within two years of date of the termination of the Participant's employment or service relationship or the date of the Change in Control. Such notice shall state the number of Purchasable Shares to be purchased and the determination of the Board of the Fair Market Value per share of such Purchasable Shares, or the Change in Control Price as defined in Section 8(g), if applicable. If no notice is given within the time limit specified above, the Purchase Option shall terminate.

(iii) Purchase Price. The purchase price to be paid for the Purchasable Shares purchased pursuant to the Purchase Option shall be (A) the (1) Change of Control Price, if applicable or (2) Fair Market Value per share, as of the date of the notice of exercise of the Purchase Option, in each case, times the number of shares being purchased, or (B) to the extent approved by the Company in its sole discretion, such other amount mutually agreeable among the Company and the Grantor; provided, however, in the event a Grantor has engaged in Detrimental Activity, the purchase price to the paid for Purchasable Shares purchased pursuant to the Purchase Option shall be $0.00. The purchase price shall be paid in cash. The closing of such purchase shall take place at the Company's principal executive offices within ten (10) days after the purchase price has been determined. At such closing, the Grantor shall deliver to the purchasers the certificates or instruments evidencing the Purchasable Shares being purchased free and clear of all liens and encumbrances (if any), duly endorsed (or accompanied by duly executed stock powers) and otherwise in good form for delivery, against payment of the purchase price by check of the purchasers. In the event that, notwithstanding the foregoing, the Grantor shall have failed to obtain the release of any pledge or other encumbrance on any Purchasable Shares by the scheduled closing date, at the option of the purchasers, the closing shall nevertheless occur on such scheduled closing date, with the cash purchase price being reduced to the extent of all unpaid indebtedness for which such Purchasable Shares are then pledged or encumbered.

(iv) Legend. To assure the enforceability of the Company's rights under this Section 9(c), until the date of a Qualifying Public Offering, each certificate or instrument representing Stock or an Award held by him, her, or it may, in the Committee's discretion, bear a conspicuous legend in substantially the following form:

> "THE SHARES [REPRESENTED BY THIS CERTIFICATE] [ISSUABLE PURSUANT TO THIS AGREEMENT] ARE SUBJECT TO AN OPTION TO REPURCHASE PROVIDED UNDER THE PROVISIONS OF THE IMMUNEERING CORPORATION LONG TERM INCENTIVE PLAN AND/OR AN AWARD AGREEMENT ENTERED INTO PURSUANT THERETO. COPIES OF SUCH PLAN AND AWARD AGREEMENT ARE AVAILABLE UPON WRITTEN REQUEST TO THE COMPANY AT ITS PRINCIPAL EXECUTIVE OFFICES."

(v) Expiration. The Company's rights under this Section 9(c) shall terminate upon the date of a Qualifying Public Offering.

(d) Tax Withholding. The Company and any of its Subsidiaries are authorized to withhold from any Award granted, or any payment relating to an Award under this Plan, including from a distribution of Stock, amounts of withholding and other taxes due or potentially payable in connection with any transaction involving an Award, and to take such other action as the Company may deem advisable to enable the Company, its Subsidiaries and Participants to satisfy obligations for the payment of withholding taxes and other tax obligations relating to any Award. The Company shall determine, in its sole discretion, the form of payment acceptable for such tax withholding obligations, including, without limitation, the delivery of cash or cash equivalents, Stock (including previously owned shares, net settlement, a broker-assisted sale, or other cashless withholding or reduction of the amount of shares otherwise issuable or delivered pursuant to the Award), other property, or any other legal consideration the Company deems appropriate. If such tax obligations are satisfied through the withholding of shares of Stock that are otherwise issuable to the Participant pursuant to an Award (or through the surrender of shares of Stock by the Participant to the Company), the number of shares of Stock that may be so withheld (or surrendered) shall be limited to the number of shares of Stock that have an aggregate Fair Market Value on the date of withholding or repurchase equal to the aggregate amount of such tax liabilities determined based on the applicable minimum statutory withholding rates for federal, state, foreign and/or local tax purposes, including payroll taxes, as determined by the Company.

(e) Limitation on Rights Conferred under Plan. Neither this Plan nor any action taken hereunder shall be construed as (i) giving any Eligible Person or Participant the right to continue as an Eligible Person or Participant or in the employ or service of the Company or any of its Subsidiaries, (ii) interfering in any way with the right of the Company or any of its Subsidiaries to terminate any Eligible Person's or Participant's employment or service relationship at any time, (iii) giving an Eligible Person or Participant any claim to be granted any Award under this Plan or to be treated uniformly with other Participants and/or employees and/or other service providers, or (iv) conferring on a Participant any of the rights of a stockholder of the Company unless and until the Participant is duly issued or transferred shares of Stock in accordance with the terms of an Award.

(f) Governing Law. All questions arising with respect to the provisions of the Plan and Awards shall be determined by application of the laws of the State of Delaware, without giving effect to any conflict of law provisions thereof, except to the extent Delaware law is preempted by federal law. The obligation of the Company to sell and deliver Stock hereunder is subject to applicable federal and state laws and to the approval of any governmental authority required in connection with the authorization, issuance, sale, or delivery of such Stock.

(g) Severability and Reformation. If any provision of the Plan or any Award Agreement is or becomes or is deemed to be invalid, illegal, or unenforceable in any jurisdiction or as to any Person or Award, or would disqualify the Plan or any Award under any law deemed applicable by the Committee, such provision shall be construed or deemed amended to conform to the applicable law or, if it cannot be construed or deemed amended without, in the determination of the Committee, materially altering the intent of the Plan or the Award, such provision shall be stricken as to such jurisdiction, Person or Award and the remainder of the Plan and any such Award shall remain in full force and effect. If any of the terms or provisions of this Plan or any Award Agreement conflict with the requirements section 422 of the Code (with respect to Incentive Stock Options), then those conflicting terms or provisions shall be deemed inoperative to the extent they so conflict with section 422 of the Code. With respect to Incentive Stock Options, if this Plan does not contain any provision required to be included herein under section 422 of the Code, that provision shall be deemed to be incorporated herein with the same force and effect as if that provision had been set out at length herein; provided, further, that, to the extent any Option that is intended to qualify as an Incentive Stock Option cannot so qualify, that Option (to that extent) shall be deemed a Nonstatutory Stock Option for all purposes of the Plan.

(h) Unfunded Status of Awards; No Trust or Fund Created. This Plan is intended to constitute an "unfunded" plan for certain incentive awards. Neither the Plan nor any Award shall create or be construed to create a trust or separate fund of any kind or a fiduciary relationship between the Company or any Affiliate and a Participant or any other Person. To the extent that any Person acquires a right to receive payments from the Company or any Affiliate pursuant to an Award, such right shall be no greater than the right of any general unsecured creditor of the Company or such Affiliate.

(i) Nonexclusivity of this Plan. Neither the adoption of this Plan by the Board nor its submission to the stockholders of the Company for approval shall be construed as creating any limitations on the power of the Board or a committee thereof to adopt such other incentive arrangements as it may deem desirable. Nothing contained in this Plan shall be construed to prevent the Company or any of its Subsidiaries from taking any corporate action which is deemed by the Company or such Subsidiary to be appropriate or in its best interest, whether or not such action would have an adverse effect on this Plan or any Award made under this Plan. No employee, beneficiary or other Person shall have any claim against the Company or any of its Subsidiaries as a result of any such action.

(j) Fractional Shares. No fractional shares of Stock shall be issued or delivered pursuant to the Plan or any Award, and the Committee shall determine in its sole discretion whether cash, other securities, or other property shall be paid or transferred in lieu of any fractional shares of Stock or whether such fractional shares of Stock or any rights thereto shall be canceled, terminated, or otherwise eliminated with or without consideration.

(k) Headings. Headings are given to the Sections and subsections of the Plan solely as a convenience to facilitate reference. Such headings shall not be deemed in any way material or relevant to the construction or interpretation of the Plan or any provision thereof.

(l) Facility of Payment. Any amounts payable hereunder to any individual under legal disability or who, in the judgment of the Committee, is unable to manage properly his financial affairs, may be paid to the legal representative of such individual, or may be applied for the benefit of such individual in any manner that the Committee may select, and the Company shall be relieved of any further liability for payment of such amounts.

(m) Gender and Number. Words in the masculine gender shall include the feminine gender, the plural shall include the singular and the singular shall include the plural.

(n) Conditions to Delivery of Stock. Nothing herein or in any Award Agreement shall require the Company to issue any shares with respect to any Award if that issuance would, in the opinion of counsel for the Company, constitute a violation of the Securities Act or any similar or superseding statute or statutes, any other applicable statute or regulation, or the rules of any applicable securities exchange or securities association, as then in effect. In addition, each Participant who receives an Award under this Plan shall not sell or otherwise dispose of Stock that is acquired upon grant or vesting of an Award in any manner that would constitute a violation of any applicable federal or state securities laws, the Plan or the rules, regulations or other requirements of the Securities and Exchange Commission or any stock exchange upon which the Stock is then listed. At the time of any exercise of an Option, or at the time of any grant of any other Award the Company may, as a condition precedent to the exercise of such Option or settlement of any other Award, require from the Participant (or in the event of his or her death, his or her legal representatives, heirs, legatees, or distributees) such written representations, if any, concerning the holder's intentions with regard to the retention or disposition of the shares of Stock being acquired pursuant to the Award and such written covenants and agreements, if any, as to the manner of disposal of such shares as, in the opinion of counsel to the Company, may be necessary to ensure that any disposition by that holder (or in the event of the holder's death, his or her legal representatives, heirs, legatees, or distributees) will not involve a violation of the Securities Act or any similar or superseding statute or statutes, any other applicable state or federal statute or regulation, or any rule of any applicable securities exchange or securities association, as then in effect. Stock or other securities shall not be delivered pursuant to any Award until payment in full of any amount required to be paid pursuant to the Plan or the applicable Award Agreement (including, without limitation, any Exercise Price, grant price, or tax withholding) is received by the Company.

(o) Section 409A of the Code. It is the general intention, but not the obligation, of the Committee to design Awards to comply with or to be exempt from the Nonqualified Deferred Compensation Rules, and Awards will be operated and construed accordingly. Neither this Section 9(o) nor any other provision of the Plan is or contains a representation to any Participant regarding the tax consequences of the grant, vesting, exercise, settlement, or sale of any Award (or the Stock underlying such Award) granted hereunder, and should not be interpreted as such. In no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Employee on account of non-compliance with the Nonqualified Deferred Compensation Rules. Notwithstanding any provision in this Plan or an Award Agreement to the contrary, in the event that a "specified employee" (as defined under the Nonqualified Deferred Compensation Rules) becomes entitled to a payment under an Award that would be subject to additional taxes and interest under the Nonqualified Deferred Compensation Rules if the Participant's receipt of such payment or benefits is not delayed until the earlier of (i) the date of the Participant's death, or (ii) the date that is six months after the Participant's "separation from service," as defined under the Nonqualified Deferred Compensation Rules (such date, the "***Section 409A Payment Date***"), then such payment or benefit shall not be provided to the Participant until the Section 409A Payment Date. Any amounts subject to the preceding sentence that would otherwise be payable prior to the Section 409A Payment Date will be aggregated and paid in a lump sum without interest on the Section 409A Payment Date. The applicable provisions of the Nonqualified Deferred Compensation Rules are hereby incorporated by reference and shall control over any Plan or Award Agreement provision in conflict therewith.

(p) Plan Effective Date and Term. This Plan was adopted by the Board on the Effective Date, and approved by the stockholders of the Company on the Effective Date, to be effective on the Effective Date. No Awards may be granted under this Plan on and after the tenth anniversary of the Effective Date. However, any Award granted prior to such termination, and the authority of the Board or Committee to amend, alter, adjust, suspend, discontinue, or terminate any such Award or to waive any conditions or rights under such Award in accordance with the terms of this Plan, shall extend beyond such termination date until the final disposition of such Award.

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the use in this Registration Statement on Form S-1 of Immuneering Corporation of our report dated May 13, 2021, relating to the consolidated financial statements of Immuneering Corporation Inc. and its subsidiary, appearing in the Prospectus, which is part of this Registration Statement.

We also consent to the reference to our firm under the heading "Experts" in such Prospectus.

/s/ RSM US LLP

Boston, Massachusetts
July 9, 2021