As filed with the U.S. Securities and Exchange Commission on April 8, 2022.

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

MAIA Biotechnology, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**2834**	**83-1495913**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

444 West Lake Street, Suite 1700
Chicago, IL 60606
(312) 416-8592
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Vlad Vitoc
Chief Executive Officer
c/o MAIA Biotechnology, Inc.
444 West Lake Street, Suite 1700
Chicago, IL 60606
(312) 416-8592
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Mitchell S. Nussbaum, Esq.
Janeane R. Ferrari, Esq.
Loeb & Loeb LLP
345 Park Avenue
New York, NY 10154
Phone: (212) 407-4000
Fax: (212) 407-4990

William N. Haddad, Esq.
Arif Soto, Esq.
Venable LLP
1270 Avenue of the Americas, 24th Floor
New York, NY 10020
Phone: (212) 503-9812
Fax: (212) 307-5598

Approximate date of commencement of proposed sale to public: As soon as practicable after the effective date hereof.

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 check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. □

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

The information contained in this preliminary prospectus is not complete and may be changed. These securities may not be sold 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.

PRELIMINARY PROSPECTUS **SUBJECT TO COMPLETION** **DATED APRIL 8, 2022**

Shares
Common Stock

MAIA Biotechnology, Inc.

This is a firm commitment initial public offering of shares of common stock of MAIA Biotechnology, Inc. (the "Company"). Prior to this offering, there has been no public market for our common stock. We anticipate that the initial public offering price of our shares will be between $ and $.

We have applied to have our common stock listed on the NASDAQ Capital Market LLC, or Nasdaq, under the symbol "MAIA."

Investing in our common stock involves a high degree of risk. See "*Risk Factors*" beginning on page 13. Neither the Securities and Exchange Commission (the "SEC") 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 to us, before expenses	$ —	$ —

(1) Underwriting discounts and commissions do not include a non-accountable expense allowance equal to 1.0% of the initial public offering price payable to the underwriters. We refer you to "Underwriting" beginning on page 146 for additional information regarding underwriters' compensation.

We have granted a 45-day option to the representative of the underwriters to purchase up to additional shares of common stock solely to cover over-allotments, if any.

The underwriters expect to deliver the shares to purchasers on or about , 2022.

ThinkEquity

The date of this prospectus is April , 2022

TABLE OF CONTENTS

You should rely only on the information contained in this prospectus. We have not authorized any other person to provide you with information different from or in addition to that contained in this prospectus, and we take no responsibility for any other information others may give you. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where an offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus. Our business, financial condition, results of operations and prospects may have changed since that date.

No action is being taken in any jurisdiction outside the United States to permit a public offering of our common stock or possession or distribution of this prospectus in that jurisdiction. Persons who come into possession of this prospectus in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus applicable to that jurisdiction.

As used in this prospectus, unless the context indicates or otherwise requires, "the Company," "our Company," "we," "us," and "our" refer to MAIA Biotechnology, Inc., a Delaware corporation, and its consolidated subsidiaries.

PROSPECTUS SUMMARY

This summary highlights certain information appearing elsewhere in this prospectus. Because it is only a summary, it does not contain all of the information that you should consider before investing in our common stock and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere in this prospectus. Before you decide to invest in our common stock, you should read the entire prospectus carefully, including "Risk Factors" beginning on page 10 and the financial statements and related notes included in this prospectus.

This prospectus includes trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included in this prospectus are the property of their respective owners.

Our Company

We are a clinical-stage biopharmaceutical company developing targeted immunotherapies for cancer. THIO, our lead asset, is an investigational dual mechanism of action drug candidate incorporating telomere targeting and immunogenicity. THIO will enter Phase 2 human trials (THIO-101) in Australia and Europe in the first half of 2022. Patients with advanced Non-Small Cell Lung Cancer (NSCLC) will be treated first with THIO followed a few days later by the immune checkpoint inhibitor Libtayo® (cemiplimab) manufactured and commercialized by Regeneron. Cemiplimab is a fully human monoclonal antibody targeting the immune checkpoint receptor PD-1 on T-cells. Cemiplimab has been approved in the United States and the rest of the world for multiple cancer indications, including NSCLC. In February 2021, we signed a clinical supply agreement with Regeneron to receive cemiplimab at no cost, which represents a significant cost-savings for the study. In return, we have granted Regeneron exclusive development rights in combination with PD-1 inhibitors for NSCLC for the study period. Based on the clinical data generated by our THIO-101 trial, in late 2024 we plan to seek an accelerated approval of THIO in the United States for the treatment of patients with advanced NSCLC, but even if granted, accelerated approval status does not guarantee an accelerated review or marketing approval by the FDA. In addition, we plan to start activities for a clinical trial of THIO in patients with advanced colorectal cancer in the first quarter of 2023.

Our Lead Product Candidate

THIO (6-thio-dG or 6-thio-2'-deoxyguanosine) is a telomere-targeting agent currently in clinical development to evaluate its activity in NSCLC. Telomeres, along with the enzyme telomerase, play a fundamental role in the survival of cancer cells and their resistance to current therapies. THIO is being developed as a second- or later line of treatment for NSCLC for patients that have progressed beyond the standard-of-care regimen of existing checkpoint inhibitors.

In 2019, our research team discovered that THIO produced telomere modifications and disruption, which ultimately induced cancer-specific innate and adaptive immune responses against immunologically "cold" or tumor types that were unresponsive to immune checkpoint inhibitors. This hypothesis was tested and demonstrated in syngeneic and humanized mouse models. THIO administered to mice in low doses and followed by an immune-checkpoint inhibiting agent, such as an anti-PD-1 or anti-PD-L1 compound, induced complete tumor regression with no tumor recurrence during the 14 weeks of observation. Further, no toxicities were reported in the tumor-free mice. These new findings were published in the peer-reviewed research scientific journal, Cancer Cell in July 2020. Based on these recent discoveries, a new therapeutic approach has been designed to advance THIO into a Phase 2 clinical trial (THIO-101) in patients with advanced NSCLC.

Our regulatory strategy includes a planned filing of an Investigational New Drug application (IND) with the U.S. FDA. This would allow U.S. sites to participate in the THIO-101 NSCLC trial. The human safety data generated in the first part of 2022 in Australia and Europe would constitute the basis of the IND application. Although we plan to rely solely on the safety and efficacy data we generate in our own clinical trials in support of our planned NDA filing, and do not plan to rely on clinical data generated by unaffiliated third parties, we take added confidence in the potential tolerability of THIO in light of the fact that the THIO doses we plan to test represent a range 4 to 40 times lower than the maximum tolerated dose tested in the earlier clinical trials sponsored by the National Cancer Institute

in the 1970s. As part of the existing data base of clinical experience with the drug, we expect to reference the older NCI studies in the public domain as well as reference NCI's original IND filing in support of an IND filing, pursuant to FDA regulations, and we are currently working with experts to evaluate the extent and quality of the existing data supporting THIO. We expect to request a pre-IND meeting with the FDA for guidance in 2022. The planned THIO-101 phase 2 trial is intended to be a proof-of-concept study that may be modified depending on interim results to include both primary and secondary endpoints and be consistent with previously approved cancer treatments. Based on the clinical data generated in the THIO-101 study and assuming THIO achieves its intended clinical effect with a manageable safety profile at one of the doses tested in the study, we expect to seek early FDA guidance on the possibility of utilizing one or more of FDA's expedited programs for serious conditions, such as fast track designation, breakthrough therapy designation, priority review and/or accelerated approval designation. Even if granted, accelerated approval status does not guarantee an accelerated review or marketing approval by the FDA. The THIO-101 study protocol may need to be amended to increase the number of patients enrolled, undergo modification of the statistical analysis, or change in the trial design and/or primary endpoints.

Our Science--Driven Telomere Targeting Approach

Telomeres are regions of repetitive DNA nucleotide sequences that are associated with specialized proteins at the ends of linear chromosomes in cells. THIO's mechanism of action comprises telomere targeting and induction of anti-cancer immunogenicity. The enzyme telomerase recognizes THIO's metabolite formed *in situ* and incorporates it into the structure of the cancer cell's telomeres, creating a faulty structure, which breaks apart the telomere spatial structure. As a result, the telomeric structure unwinds and the cancer cells die. We believe THIO transforms "cold" tumors into "hot" tumors rendering them responsive to immunotherapy (checkpoint inhibitors) and this process takes place promptly within 24 to 72 hours. We believe we can improve the immunotherapy efficacy and we can restore the immunotherapy efficacy in patients who have progressed or developed resistance to prior immunotherapy.

Telomere maintenance is essential for cell proliferation and resilience in cancer cells, and thus represents one of the key therapeutic targets for cancer treatment. Telomerase is an enzyme that is present in a majority of human cancer cells (over 85% in the aggregate), across various tumor types. In contrast, its activity is detected in less than 1% of normal cells. THIO has only been shown to be active in cancer cells that are telomerase positive (TERT+). Cancer cells are constantly telomerase positive due to an uncontrolled division process, while a relatively small number of normal cells are telomerase positive only transiently. Therefore, THIO activity is expected to be highly specific to cancer cells versus normal cells. Cancer-specific disturbance of telomeric structure, mediated by telomerase, is likely to lead to disruption in the cell cycle, followed by a very rapid and telomere-length independent cell death. THIO was observed to induce cancer-specific telomere disruption, by using the enzyme telomerase, which differentiates THIO from all other available cancer therapies currently in clinical use. We are also currently developing potential next generation small molecule telomere modifying agents with the goal of identifying additional proprietary drug candidates, across multiple cancer types. We have generated 82 new telomere-targeting compounds of which 60 compounds have been evaluated in vitro. Currently, five molecules have been selected for further evaluation in additional in vitro and in vivo models.

Human clinical trials prior to approval are typically conducted in three sequential Phases that may overlap or be combined. In Phase 1, the drug or biologic is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion. In Phase 2, the drug or biologic is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule for patients having the specific disease. In Phase 3, larger-scale clinical trials are undertaken to evaluate clinical efficacy and safety and the overall risk/benefit ratio of the product. Post-approval studies, or Phase 4 clinical trials, may be conducted voluntarily, or as a condition of FDA's approval of a drug. These studies may be used to confirm preliminary efficacy results, gain additional experience from the treatment of certain patient populations, or to support additional indications or labeling changes.

We completed our selection process for the clinical sites for our Phase 2 study in Australia and Europe and our application to start the Phase 2 study in Australia has been approved. We also plan to submit a similar application in the Second Quarter 2022, to conduct the same Phase 2 study in Europe.

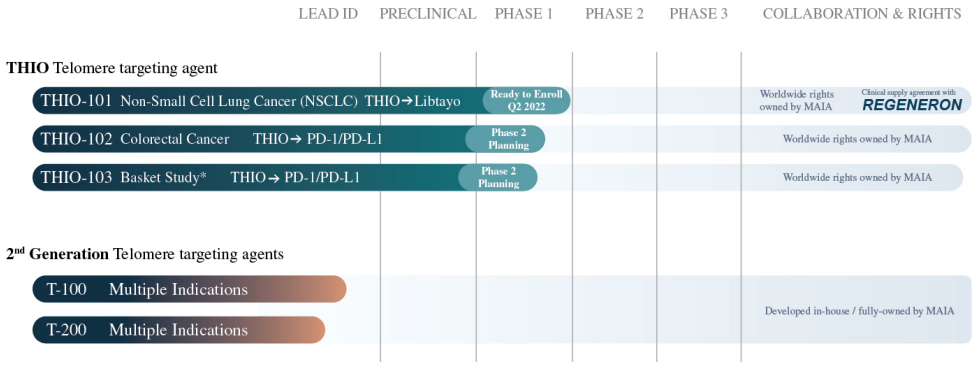
Our Second Generation Target Candidates

Our THIO program drives our development pipeline of second-generation telomere targeting agents. We have initiated an early-stage research and discovery program aimed at identifying new compounds capable of acting through similar mechanisms of activity as THIO, such as the targeting and modifying telomeric structures of cancer cells through cancer-cell intrinsic telomerase activity. The main objective for this program is to discover new compounds with potentially improved specificity towards cancer cells relative to normal cells and with potentially increased anticancer activity. This program may also allow us to strengthen our patent portfolio. Although the program is in early stages and we may not be able to identify suitable compounds, we believe we will be able to create a second generation of THIO-like compounds.

Our current 2nd-generation pipeline of potential telomere-targeting agents includes five compounds that have successfully undergone *in vitro* inhibitory testing in five cancer models. The data from those studies showed a significantly lower 50% inhibitory concentration (IC50) for those compounds compared to THIO. Based on those data, we have progressed those five compounds to *in vivo* testing and with proceeds from the IPO, we plan to initiate pre-IND testing for two of them in mid-2022, with the goal of advancing them to clinical trials by the end of 2024.

OUR PIPELINE

Our robust pipeline includes several targeted immuno-oncology candidates for relapsed and refractory cancers.



*Basket study expected to evaluate: Small Cell Lung Cancer (SCLC), Hepatocellular Carcinoma (HCC), Glioblastoma (GBM), Melanoma, Ovarian, Pancreatic, Breast & Prostate cancers.

Pipeline products are under investigation and have not been proven to be safe or effective. There is no guarantee any product will be approved in the sought-after indication or will meet the developmental milestones set forth above.

Our Strategy

Our goal is to be the leader in the discovery, development and commercialization of cancer telomere targeting agents and other similar small molecules. Our initial focus is to efficiently advance our Phase 2 clinical program using THIO in sequential combination with cemiplimab. Ultimately, we envision positioning THIO as a patient anticancer immunity priming treatment for all immune-activating agents used in the treatment of cancer. To date, THIO has never been tested in clinical trials in combination with any check-point inhibitor. The key elements of our strategy are to:

- Advance our existing clinical programs, including seeking accelerated approval for THIO in NSCLC as a tumor mass-reducing and simultaneously immune system priming agent administered in advance of the immune-activating agent, cemiplimab for treatment of advanced NSCLC, and ultimately, as a cancer treatment foundation in multiple indications and geographies. Even if granted, accelerated approval status does not guarantee an accelerated review or marketing approval by the FDA.
- Broaden the clinical development of THIO by exploring synergistic administration prior to other standard-of care immune-therapies including cell therapy.
- Develop a franchise of telomere-targeting cancer treatments not inclusive of checkpoint inhibitors.
- Leverage our regulatory strategy to acquire additional human data faster outside U.S. for other cancer indications.
- Selectively enter into strategic collaborations with pharmaceutical and biotechnology companies that have immune activating therapies.
- Expand our existing intellectual property portfolio.

We will face certain challenges in implementing our business strategy including, among others, the fact that earlier development of THIO was not commercially pursued. Even if THIO successfully advances through clinical studies and towards approval for use, we may face early competition from generic alternatives to THIO after expiration of

any applicable regulatory exclusivities. The FDA's accelerated approval pathway, even if initially granted, does not guarantee an accelerated review or marketing approval by the FDA.

Our Intellectual Property

Our global patent and patent-pending estate covers several areas. Telomerase mediated telomere altering compounds and treatment of therapy-resistant cancers are part of our portfolio. Further, THIO's immunogenic treatment strategy, which focuses on sequential combination with checkpoint inhibitors has been filed. We maintain four issued patents and have 16 pending applications.

Our Leadership Team

We have assembled an experienced management team with deep research, development, and commercialization experience in the areas of cancer treatment, telomere-related science, immunotherapy, and spreading across a vast array of oncology indications. Members of our team bring experiences from multiple biotech and pharmaceutical companies including Pfizer Inc., Bayer Oncology, Novartis Oncology, Astellas Pharma Inc., Janssen - a Johnson & Johnson pharmaceutical company, Incyte Corporation, Pharmacyclics Inc., Juno Therapeutics Inc., Celgene, Cephalon Inc., Geron Corporation, and AbbVie Bio Corp., among others.

Our Corporate Information

We were incorporated in Delaware in August 2018, and we have operations in Chicago, Illinois, with some of our team members setup virtually and working remotely in California, Nevada and Florida. Our principal executive office is located at 444 West Lake Street, Suite 1700, Chicago, IL 60606, and our phone number is (312) 416-8592. In July 2021, we established a wholly owned Australian subsidiary, MAIA Biotechnology Australia Pty Ltd, to conduct various preclinical and clinical activities for the development of our product candidates. Our website address is *www.MAIABiotech.com*. The information contained on our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our common stock.

Implications of Being an Emerging Growth Company

We are an "emerging growth company," as defined in Section 2(a) of the Securities Act of 1933, as amended (the "Securities Act"), as modified by the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. As such, we are eligible to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to:

- 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;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements, and registration statements; and
- exemptions from the requirements of holding a non-binding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

If some investors find our common stock less attractive as a result of these exemptions, there may be a less active trading market for our common stock and the price of our common stock may be more volatile.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. In other words, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We intend to take advantage of the benefits of this extended transition period.

We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least $1.07 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common

stock that is held by non-affiliates exceeds $700 million as of the prior June 30, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period. References herein to emerging growth company will have the meaning associated with it in the JOBS Act.

Implications of Being a Smaller Reporting Company

Additionally, we are a "smaller reporting company" as defined in Rule 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company until the last day of the fiscal year in which (1) the market value of our common stock held by non-affiliates equals or exceeds $250 million as of the end of that year's second fiscal quarter, or (2) our annual revenues equaled or exceeded $100 million during such completed fiscal year and the market value of our common stock held by non-affiliates equals or exceeds $700 million as of the end of that year's second fiscal quarter.

THE OFFERING

Issuer	MAIA Biotechnology, Inc.
Common stock offered	shares of common stock.
Common stock to be outstanding after this offering	shares (or shares if the underwriters' option to purchase additional shares is exercised in full) of common stock.
Offering price	$ per share.
Over-allotment option	We have granted the underwriters a 45-day option to purchase up to an additional shares of our common stock at the initial public offering price, less the underwriting discount, to cover over-allotments, if any.
Use of proceeds	We estimate that we will receive net proceeds of approximately $ million from our sale of common stock in this offering, or approximately $ million if the underwriters exercise their over-allotment option in full. We intend to use the net proceeds from this offering, along with our existing cash and cash equivalents, to fund the planned trials of THIO, pre-clinical development of second-generation of telomere targeting compounds and our other research and development activities, as well as for working capital and other general corporate purposes. See "Use of Proceeds" in this prospectus for a more complete description of the intended use of proceeds from this offering.
Dividend policy	We do not anticipate paying any dividends on our common stock in the foreseeable future; however, we may change this policy in the future. See "Dividend Policy."
Concentration of ownership	Upon completion of this offering, our executive officers and directors will beneficially own, in the aggregate, approximately % of the outstanding shares of our common stock.
Proposed trading market and symbol	We have applied to list our common stock for trading on the Nasdaq under the symbol "MAIA." No assurance can be given that our application will be approved.
Risk factors	Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 13 and the other information in this prospectus for a discussion of the factors you should consider carefully before you decide to invest in our common stock.
Lock-Up	We, each of our officers, directors, and certain of our stockholders have agreed, subject to certain exceptions, not to sell, offer, agree to sell, contract to sell, hypothecate, pledge, grant any option to purchase, make any short sale of, or otherwise dispose of or hedge, directly or indirectly, any shares of our capital stock or any securities convertible into or exercisable or exchangeable for shares of capital stock, for a period of 180 days after the date of this prospectus, without the prior written consent of the representative. Following the expiration of the applicable lock-up period, all of the issued and outstanding shares of our common stock will be eligible for future sale, subject to the applicable volume, manner of sale, holding period, and other limitations of Rule 144. See the section of this prospectus entitled "Underwriting" for additional information.
Representative's Warrants	The registration statement of which this prospectus is a part also registers for sale warrants to purchase shares of our common stock which we will issue to the representative of the underwriters as a portion of the underwriting compensation payable to the underwriters in connection with this offering. The warrants will be exercisable for a four-and-one-half year period commencing six months following the closing date of this offering at an exercise price equal to 125% of the initial public offering price of the common stock. Please see "Underwriting – Representative's Warrants" for a description of these warrants.

The number of shares of our common stock to be outstanding after this offering is based on 7,936,320 shares of our common stock outstanding as of April 8, 2022, and excludes the following:

- 5,123,786 shares of common stock issuable upon exercise of options to purchase shares of common stock outstanding as of April 8, 2022, with a weighted-average exercise price of $2.02 per share;
- 242,911 shares of common stock reserved for future issuance as of April 8, 2022, under our 2020 Plan;
- shares of common stock reserved for issuance under our 2021 Equity Incentive Plan that we intend to adopt in connection with this offering; and
- warrants to purchase 1,250,006 shares of common stock, with a weighted average exercise price of $4.14 per share and of which warrants to purchase 568,021 shares must be exercised or they will expire at the closing of our initial public offering.

Unless we indicate otherwise or unless the context otherwise requires, all information in this prospectus assumes the following:

- no exercise of outstanding options or warrants;
- no exercise by the underwriters of their option to purchase up to additional shares of our common stock from us to cover over-allotments, if any;
- no exercise of the representative's warrants to be issued upon consummation of this offering at an exercise price equal to 125% of the initial offering price of the common stock;
- the filing and effectiveness of our amended and restated certificate of incorporation and the effectiveness of our amended and restated bylaws, each of which will be in effect immediately upon the consummation of this offering; and
- an initial public offering price of $ per share, the midpoint of the estimated initial public offering price range on the cover page of this prospectus.

SUMMARY OF RISK FACTORS

Our business is subject to a number of risks of which you should be aware of before making an investment decision. These risks are discussed more fully in the "*Risk Factors*" section of this prospectus immediately following this prospectus summary. Some of these risks include the following:

- We have incurred losses since our inception and anticipate that we will continue to incur increasing losses for the foreseeable future.
- Even if this offering is successful, we will require additional capital to fund our operations, and if we fail to obtain necessary financing, we may not be able to complete the development and commercialization of THIO.
- 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 have a limited operating history and no history of commercializing pharmaceutical products, which may make it difficult to evaluate the prospects for our future viability.
- We are heavily dependent on the success of THIO, our most advanced candidate, which is still under clinical development, and if this drug does not receive regulatory approval or is not successfully commercialized, our business may be harmed.
- Clinical trials are expensive, time consuming, difficult to design and implement, and involve uncertain outcomes.
- Our product candidates are based on novel technologies, which make it difficult to predict the timing, results and cost of product candidate development and likelihood of obtaining regulatory approval.
- We may find it difficult to enroll patients in our clinical trials given the limited number of patients who have the diseases for which our product candidates are being studied which could delay or prevent the start of clinical trials for our product candidates.
- 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.
- The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming, expensive, and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for THIO or any other candidates, our business will be substantially harmed.
- Enrollment and retention of patients in clinical trials is an expensive and time-consuming process and could be made more difficult or rendered impossible by multiple factors outside our control.
- Results of preclinical studies, early clinical trials or analyses may not be indicative of results obtained in later trials.
- The market opportunities for THIO, if approved, may be smaller than we anticipate.
- Development of THIO could take longer, be more expensive, or become impractical if the FDA requires the use of an FDA-approved companion diagnostic test in conjunction with treatment with THIO.
- Even if we obtain FDA approval for THIO or any other candidates in the United States, we may never obtain approval for or commercialize THIO or any other development candidate in any other jurisdiction, which would limit our ability to realize their full global market potential.
- The successful commercialization of THIO and any other candidate we develop will depend in part on the extent to which governmental authorities and health insurers establish adequate coverage, reimbursement levels, and pricing policies.
- Even if THIO or any candidate we develop receives marketing approval, it may fail to achieve market acceptance by physicians, patients, third-party payors or others in the medical community necessary for commercial success.
- If we are unable to establish sales, marketing and distribution capabilities either on our own or in collaboration with third parties, we may not be successful in commercializing THIO, if approved.
- A variety of risks associated with operating internationally could materially adversely affect our business.
- Our employees and independent contractors, including principal investigators, clinical trial sites, contract research organizations ("CROs"), consultants, vendors, and any third parties we may engage in connection with development and commercialization, may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have a material adverse effect on our business.

- We currently rely on third-party contract manufacturing organizations, or CMOs, for the production of clinical supply of THIO and intend to rely on CMOs for the production of commercial supply of THIO, if approved. Our dependence on CMOs may impair the development and commercialization of the drug, which would adversely impact our business and financial position.
- We intend to rely on third parties to conduct, supervise and monitor our clinical trials. If those third parties do not successfully carry out their contractual duties, or if they perform in an unsatisfactory manner, it may harm our business.
- We depend on license agreements with the University of Texas Southwestern, or UTSW, to permit us to use patents and patent applications, as well as to exploit specific technological know-how. Termination of these rights or the failure to comply with obligations under these agreements could materially harm our business and prevent us from developing or commercializing our product candidates.
- We have been granted licenses of use to patent applications. There can be no assurance that any of the patent applications that we have licenses to will result in issued patents. As a result, our ability to protect our proprietary technology in the marketplace may be limited.
- Our patents may be challenged in courts or in patent offices which could result in the invalidation, narrowing or unenforceability of our patents and our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.
- Changes in patent laws or patent jurisprudence could diminish the value of patents in general, thereby impairing our ability to protect our product candidates.
- Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.
- Intellectual property rights do not address all potential threats to our competitive advantage.
- Our reliance on third parties requires us to share our trade secrets, which increases the possibility that our trade secrets will be misappropriated or disclosed, and confidentiality agreements with employees and third parties may not adequately prevent disclosure of trade secrets and protect other proprietary information.
- 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 may need to license certain intellectual property from third parties, and such licenses may not be available or may not be available on commercially reasonable terms.
- We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of their former employers or other third parties.
- We expect to expand our development, regulatory, and sales and marketing capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.
- There is no existing market for our common stock and an active, liquid trading market for our common stock may not develop.
- The price of our common stock may be volatile and you could lose all or part of your investment.
- We do not intend to pay dividends for the foreseeable future, and our ability to pay dividends to our stockholders is restricted by applicable laws and regulations.
- We may, in the future, issue additional capital stock, which would reduce investors' percent of ownership and may dilute our share value.
- A potential failure to maintain effective internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act could have a material adverse effect on our business, financial condition, and results of operations.
- We identified material weaknesses in our internal control over financial reporting, and we may identify additional material weaknesses in the future that may cause us to fail to meet our reporting obligations or result in material misstatements of our financial statements. If we fail to remediate any material weaknesses or if we otherwise fail to establish and maintain effective control over financial reporting, our ability to accurately and timely report our financial results could be adversely affected.
- The lack of public company experience of our management team could adversely impact our ability to comply with the reporting requirements of U.S. securities laws, which could have a materially adverse effect on our business.
- We will incur increased costs as a result of being a publicly traded company.

SUMMARY FINANCIAL INFORMATION

The following tables present our summary consolidated financial and other data as of and for the periods indicated. The summary consolidated statements of operations data for the fiscal years ended December 31, 2021 and 2020 and the consolidated balance sheet data as of December 31, 2021 and 2020 are derived from our audited financial statements included elsewhere in this prospectus.

The summarized financial information presented below is derived from and should be read in conjunction with our consolidated financial statements including the notes to those financial statements, which are included elsewhere in this prospectus along with the sections entitled "Selected Financial Data," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Capitalization." Our historical results are not necessarily indicative of results that should be expected in any future period.

	Years Ended December 31,	
	2021	**2020**
Statement of Operations Data:		
Total operating expenses	$ 7,786,627	$ 6,975,601
Loss from operations	(7,786,627)	(6,975,601)
Other income (expense), net	(4,791,584)	16,353
Net loss	(12,578,211)	(6,959,248)
Net loss attributable to MAIA Biotechnology, Inc. shareholders	(12,503,880)	(6,636,660)
Net loss per common share - basic and diluted (1)	$ (2.37)	$ (1.50)
Weighted average common shares outstanding - basic and diluted (1)	5,278,435	4,427,242

(1) See Note 1 to our audited financial statements appearing at the end of this prospectus for further details on the calculation of basic and diluted net loss per common share.

	December 31, 2021	**December 31, 2020**
Balance Sheet Data:		
Cash	$ 10,574,292	$ 663,457
Working capital (deficit) (2)	8,526,499	(947,239)
Total assets	11,327,199	746,505
Total liabilities	2,145,996	2,362,805
Total stockholders' equity (deficit)	9,181,203	(1,616,300)

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

RISK FACTORS

Any investment in our common stock involves a high degree of risk. You should carefully consider the risks described below, which we believe represent certain of the material risks to our business, together with the information contained elsewhere in this prospectus, before you make a decision to invest in our common stock. Please note that the risks highlighted here are not the only ones that we may face. For example, additional risks presently unknown to us or that we currently consider immaterial or unlikely to occur could also impair our operations. If any of the following events occur or any additional risks presently unknown to us actually occur, our business, financial condition and operating results may be materially adversely affected. In that event, the trading price of our common stock could decline and you could lose all or part of your investment.

Risks Related to Our Financial Position and Need for Additional Capital

We have incurred losses since inception and anticipate that we will continue to incur losses for the foreseeable future. We are not currently profitable, and we may never achieve or sustain profitability.

We are a clinical stage biopharmaceutical company with a limited operating history and have incurred losses since our formation. We incurred net losses of $12,578,211 and $6,959,248 for the years ended December 31, 2021 and 2020, respectively. As of December 31, 2021, we had an accumulated deficit of $28,437,993. We have not commercialized any products and have never generated revenue from the commercialization of any product. To date, we have devoted most of our financial resources to research and development, including our preclinical and clinical work, and to intellectual property.

We expect to incur significant additional operating losses for the next several years, at least, as we advance THIO and any other candidates through clinical development, complete clinical trials, seek regulatory approval and commercialize the drug or any other candidates, if approved. The costs of advancing candidates into each clinical phase tend to increase substantially over the duration of the clinical development process. Therefore, the total costs to advance any of our candidates to marketing approval in even a single jurisdiction will be substantial. Because of the numerous risks and uncertainties associated with pharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to begin generating revenue from the commercialization of any products or achieve or maintain profitability. Our expenses will also increase substantially if and as we:

- commence our Phase 2 trial, or conduct clinical trials for any other indications or other candidates;
- establish sales, marketing, distribution, and compliance infrastructures to commercialize our drug, if approved, and for any other candidates for which we may obtain marketing approval;
- maintain, expand and protect our intellectual property portfolio;
- hire additional clinical, scientific and commercial personnel;
- add operational, financial and management information systems and personnel, including personnel to support our development and planned future commercialization efforts, as well as to support our transition to a public reporting company; and
- acquire or in-license or invent other candidates or technologies.

Furthermore, our ability to successfully develop, commercialize and license any candidates and generate product revenue is subject to substantial additional risks and uncertainties, as described under "— Risks Related to Development, Clinical Testing, Manufacturing and Regulatory Approval" and "— Risks Related to Commercialization." As a result, we expect to continue to incur net losses and negative cash flows for the foreseeable future. These net losses and negative cash flows have had, and will continue to have, an adverse effect on our stockholders' equity and working capital. The amount of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenues. If we are unable to develop and commercialize one or more product candidates, either alone or through collaborations, or if revenues from any product that receives marketing approval are insufficient, we will not achieve profitability. Even if we do achieve profitability, we may not be able to sustain profitability or meet outside expectations for our profitability. If we are unable to achieve or sustain profitability or to meet outside expectations for our profitability, the value of our common stock will be materially and adversely affected.

Even if this offering is successful, we will require additional capital to fund our operations, and if we fail to obtain necessary financing, we may not be able to complete the development and commercialization of THIO.

Our operations have consumed substantial amounts of cash since inception. We expect to continue to spend substantial amounts to advance the clinical development of THIO and launch and commercialize THIO, if we receive regulatory approval. We will require additional capital for the further development and potential commercialization of THIO and may also need to raise additional funds sooner to pursue a more accelerated development of THIO. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate our research and development programs or any future commercialization efforts.

We believe that the net proceeds from this offering together with our existing cash as of December 31, 2021, will enable us to fund our operating expenses and capital expenditure requirements for at least the next 36 months. We have based this estimate on assumptions that may prove to be wrong, and we could deploy our available capital resources sooner than we currently expect. Our future funding requirements, both near and long-term, will depend on many factors, including, but not limited to the:

- initiation, progress, timing, costs and results of preclinical studies and clinical trials, including patient enrollment in such trials, for THIO or any other future candidates;
- clinical development plans we establish for THIO and any other future candidates;
- obligation to make royalty and non-royalty sublicense receipt payments to third-party licensors, if any, under our licensing agreements;
- number and characteristics of candidates that we discover or in-license and develop;
- outcome, timing and cost of regulatory review by the FDA and comparable foreign regulatory authorities, including the potential for the FDA or comparable foreign regulatory authorities to require that we perform more studies than those that we currently expect;
- costs of filing, prosecuting, defending and enforcing any patent claims and maintaining and enforcing other intellectual property rights;
- effects of competing technological and market developments;
- costs and timing of the implementation of commercial-scale manufacturing activities; and
- costs and timing of establishing sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval.

If we are unable to expand our operations or otherwise capitalize on our business opportunities due to a lack of capital, our ability to become profitable will be compromised.

Raising additional capital may cause dilution to our stockholders, including purchasers of common stock in this offering, restrict our operations or require us to relinquish rights to our technologies or product candidates.

Until such time, if ever, as we can generate substantial revenue, we may finance our cash needs through a combination of equity offerings, debt financings, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements or other sources. We do not currently have any committed external source of funds. In addition, we may seek additional capital due to favorable market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may be required to relinquish valuable rights to our technologies, intellectual property, future revenue streams or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate candidate development or future commercialization efforts.

We have a limited operating history and no history of commercializing pharmaceutical products, which may make it difficult to evaluate the prospects for our future viability.

We were incorporated in Delaware and began our operations in August 2018. Our operations to date have been limited to financing and staffing our company, licensing candidates, conducting preclinical studies, manufacturing clinical supply, and preparing for clinical studies of THIO. We have not yet demonstrated the ability to successfully complete a large-scale, pivotal clinical trial, obtain marketing approval, manufacture a commercial scale product, arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Consequently, predictions about our future success or viability may not be as accurate as they could be if we had a history of successfully developing and commercializing pharmaceutical products.

In addition, as a business with a limited operating history, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. We will eventually need to transition from a company with a research focus to a company capable of supporting commercial activities. We may not be successful in such a transition and, as a result, our business may be adversely affected.

As we continue to build our business, we expect our financial condition and operating results may fluctuate significantly from quarter to quarter and year to year due to a variety of factors, many of which are beyond our control. Accordingly, you should not rely upon the results of any particular quarterly or annual period as indications of future operating performance.

Risks Related to Development, Clinical Testing, Manufacturing and Regulatory Approval

We are heavily dependent on the success of THIO, which is still under clinical development, and if this drug does not receive regulatory approval or is not successfully commercialized, our business may be harmed.

We do not have any products that have gained regulatory approval. Currently, our lead clinical stage candidate is THIO. As a result, our business is dependent on our ability to successfully complete clinical development of, obtain regulatory approval for, and, if approved, successfully commercialize THIO in a timely manner. We cannot commercialize THIO in the United States without first obtaining regulatory approval from the FDA; similarly, we cannot commercialize THIO outside of the United States without obtaining regulatory approval from comparable foreign regulatory authorities. Before obtaining regulatory approvals for the commercial sale of THIO for a target indication, we must demonstrate with substantial evidence gathered in preclinical studies and clinical trials, generally including two adequate and well-controlled clinical trials, and, with respect to approval in the United States, to the satisfaction of the FDA, that THIO is safe and effective for use for that target indication and that the manufacturing facilities, processes and controls are adequate. Even if we were to successfully obtain approval of THIO from the FDA and comparable foreign regulatory authorities, any approval might contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, or may be subject to burdensome post-approval study or risk management requirements. If we are unable to obtain regulatory approval for THIO in one or more jurisdictions, or any approval contains significant limitations, we may not be able to obtain sufficient funding or generate sufficient revenue to continue the development of any other candidate that we may in-license, develop or acquire in the future. Furthermore, even if we obtain regulatory approval for THIO, we will still need to develop a commercial organization, establish commercially viable pricing and obtain approval for adequate reimbursement from third-party and government payors. If we are unable to successfully commercialize THIO, we may not be able to earn sufficient revenue to continue our business.

We may face future business disruption and related risks resulting from the recent outbreak of the novel coronavirus 2019 (COVID-19) or from another pandemic, epidemic or outbreak of an infectious disease, any of which could have a material adverse effect on our business.

The development of our drug candidates could be disrupted and materially adversely affected in the future by a pandemic, epidemic or outbreak of an infectious disease like the recent outbreak of COVID-19. For example, as a result of measures imposed by the governments in regions affected by COVID-19 businesses and schools have been suspended due to quarantines or “stay at home” orders intended to contain this outbreak. The spread of COVID-19 from China to other countries has resulted in the Director General of the World Health

Organization declaring the outbreak of COVID-19 as a Public Health Emergency of International Concern (PHEIC), based on the advice of the Emergency Committee under the International Health Regulations (2005). In March 2020, and subsequently, various international travel restrictions were imposed and modified between the US and foreign countries and such restrictions may continue, be reimposed, or be expanded or otherwise further modified for the foreseeable future. COVID-19 continues to spread globally, including with the advent of the new "Delta" variant throughout 2021. The COVID-19 outbreak has impacted international stock markets, which continue to reflect the uncertainty associated with the slow-down in global economies and the reduced levels of international travel experienced since the beginning of January 2020. We continue to assess our business plans and the impact COVID-19 may have on our ability to advance the development of our drug candidates, including delays in starting or completing clinical trials, or to raise financing to support the development of our drug candidates, but no assurances can be given that this analysis will enable us to avoid part or all of any impact from the spread of COVID-19 or its consequences, including downturns in business sentiment generally or in our sector in particular. One of our initial clinical studies is taking place in Australia, which has imposed one of the strictest COVID-19-related measures, including lock-downs. While we have not currently experienced any potential delays or increased costs as a result of these measures, we may do so in the future.

The spread of an infectious disease, including COVID-19, may also result in the inability of our suppliers to deliver components or raw materials on a timely basis or materially and adversely affect our collaborators and out-license partners' ability to perform preclinical studies and clinical trials. In addition, hospitals may reduce staffing and reduce or postpone certain treatments in response to the spread of an infectious disease. Such events may result in a period of business and manufacturing disruption, and in reduced operations, any of which could materially affect our business, financial condition and results of operations. The extent to which the coronavirus impacts our business will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of the coronavirus and the actions to contain the coronavirus or treat its impact, among others.

Clinical trials are expensive, time-consuming and difficult to design and implement, and involve an uncertain outcome.

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. Because the results of preclinical studies and early clinical trials are not necessarily predictive of future results, THIO and our other compounds may not have favorable results in later preclinical and clinical studies or receive regulatory approval. We may experience delays in initiating and completing any clinical trials that we intend to conduct, and we do not know whether planned clinical trials will begin on time, need to be redesigned, enroll patients on time or 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 approval to commence and continue to conduct a trial;
- reaching an agreement on acceptable terms with prospective contract research organizations, or 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 Institutional Review Board, or IRB, approval at each site, or Independent Ethics Committee, or IEC, approval at sites outside the United States;
- recruiting suitable patients to participate in a trial in a timely manner and in sufficient numbers;
- having patients complete a trial or return for post-treatment follow-up;
- imposition of a clinical hold by regulatory authorities, or IRBs, including as a result of unforeseen safety issues or side effects or failure of trial sites to adhere to regulatory requirements or follow trial protocols;
- clinical sites deviating from trial protocol, failing to adequately enroll study subjects, committing fraud or other violations of regulatory requirements, or dropping out of a trial, which can render data from that site unusable in support of regulatory approval;
- addressing patient safety concerns that arise during the course of a trial;

- adding a sufficient number of clinical trial sites; or
- manufacturing sufficient quantities of THIO for use in clinical trials.

We could also encounter delays if a clinical trial is suspended or terminated by us, the IRBs or IECs of the institutions in which such trials are being conducted, the Data Safety Monitoring Board, or DSMB, for such trial or the FDA or other 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 other 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. Furthermore, we rely on CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials and, while we have agreements governing their committed activities, we have limited influence over their actual performance, as described in "— Risks Related to Our Dependence on Third Parties."

Treatment of cancer patients with our oncology product candidates may be used in combination with other cancer drugs, such as other immuno-oncology agents, monoclonal antibodies or other protein-based drugs or small molecule anti-cancer agent such as targeted agents or chemotherapy, 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. Additionally, our product candidates could potentially cause adverse events. 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. As described above, any of these events could prevent us from obtaining regulatory approval or achieving or maintaining market acceptance of our product candidates and impair our ability to commercialize our products. Because all of our product candidates are derived from our platform technologies, a clinical failure of one of our product candidates may also increase the actual or perceived likelihood that our other product candidates will experience similar failures.

Of the large number of products in development, only a small percentage successfully complete the FDA or comparable foreign regulatory authorities' approval processes and are commercialized. The lengthy approval process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval to market our product candidates, which would significantly harm our business, financial condition, results of operations and prospects.

Even if we eventually complete clinical testing and receive approval of a biologics license application (BLA) or foreign marketing application for our product candidates, the FDA or the comparable foreign regulatory authorities may grant approval contingent on the performance of costly additional clinical trials, including post-market clinical trials. The FDA or the comparable foreign regulatory authorities also may approve a product candidate for a more limited indication or patient population than we originally request, and the FDA or comparable foreign regulatory authorities may not approve the labeling that we believe is necessary or desirable for the successful commercialization of a product candidate. Any delay in obtaining, or inability to obtain, applicable regulatory approval would delay or prevent commercialization of that product candidate and would adversely impact our business 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.

Our product candidates are based on novel technologies, which make it difficult to predict the timing, results and cost of product candidate development and likelihood of obtaining regulatory approval.

We have not yet succeeded and may not succeed in demonstrating efficacy and safety for any product candidates in clinical trials or in obtaining marketing approval thereafter and use of our platform technologies may not ever result in marketable products. We may also experience delays in developing a sustainable, reproducible, and scalable manufacturing process or transferring that process to commercial partners or establishing our own commercial manufacturing capabilities, which may prevent us from completing our clinical trials or commercializing any products on a timely or profitable basis, if at all.

Serious adverse events, undesirable side effects or other unexpected properties of our product candidates may be identified during development or after approval, which could lead to the discontinuation of our clinical development programs, refusal by regulatory authorities to approve our product candidates or, if discovered following marketing approval, revocation of marketing authorizations or limitations on the use of our product candidates thereby limiting the commercial potential of such product candidate.

As we develop our product candidates and initiate clinical trials of our additional product candidates, serious adverse events, or SAEs, undesirable side effects, relapse of disease or unexpected characteristics may emerge causing us to abandon these product candidates or limit their development to more narrow uses or subpopulations in which the SAEs or undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective or in which efficacy is more pronounced or durable. Should we observe SAEs in our clinical trials or identify other undesirable side effects or other unexpected findings depending on their severity, our trials could be delayed or even stopped and our development programs may be halted entirely.

Even if our product candidates initially show promise in early clinical trials, the side effects of biological products are frequently only detectable after they are tested in larger, longer and more extensive clinical trials or, in some cases, after they are made available to patients on a commercial scale after approval. Sometimes, it can be difficult to determine if the serious adverse or unexpected side effects were caused by the product candidate or another factor, especially in oncology subjects who may suffer from other medical conditions and be taking other medications. If serious adverse or unexpected side effects are identified during development or after approval and are determined to be attributed to our product candidate, we may be required to develop 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 more costly than what is typical for the industry. Product-related side effects could also result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects significantly.

In addition, if one or more of our product candidates receives marketing approval, and we or others later identify undesirable side effects or ADA caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may suspend, withdraw or limit approvals of such product, or seek an injunction against its manufacture or distribution;
- regulatory authorities may require additional warnings on the label, including “boxed” warnings, or issue safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings or other safety information about the product;
- we may be required to create a medication guide outlining the risks of such side effects for distribution to patients;
- we may be required to change the way a product is administered or conduct additional clinical trials;
- the product may become less competitive, and our reputation may suffer;
- we may decide to remove the product from the marketplace; and
- we may be subject to fines, injunctions or the imposition of civil or criminal penalties.

Interim, topline and preliminary data from our clinical trials 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, interim or topline 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 as patient enrollment and treatment continues and more patient data become available. Adverse differences between previous preliminary or interim data and future interim or final data could significantly harm our business prospects. We may also announce topline data following the completion of a preclinical study or clinical trial, which may be 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 interim, topline 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. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, interim, topline and preliminary data should be viewed with caution until the final data are available.

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 to be material or otherwise appropriate information to include in our disclosure, and any information we determine not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product candidate or our business. If the interim, topline, or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for and commercialize our product candidates, our business, operating results, prospects or financial condition may be harmed.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, or otherwise prevent new or modified products from being developed, or approved or commercialized in a timely manner or at all, 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, statutory, regulatory, and policy changes, the FDA's ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the FDA's ability to perform routine functions. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may also slow the time necessary for new biologics to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, including for 35 days beginning on December 22, 2018, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical FDA employees and stop critical activities.

Separately, in response to the global COVID-19 pandemic, on March 10, 2020 the FDA announced its intention to postpone most foreign inspections of manufacturing facilities and products, and on March 18, 2020, the FDA announced its intention to temporarily postpone routine surveillance inspections of domestic manufacturing facilities. Subsequently, 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. 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 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 must prioritize our research programs and will need to focus our discovery and development on select product candidates and indications. Correctly prioritizing our research and development activities is particularly important for us due to the breadth of potential product candidates and indications that we believe could be pursued using our platform technologies. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications that later prove to have greater commercial potential. 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 and product candidates for specific indications may not yield any commercially viable

products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may also relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

We may not be successful in our efforts to identify or discover additional product candidates in the future.

Our research programs may initially show promise in identifying potential product candidates, yet fail to yield product candidates for clinical development for a number of reasons, including:

- our inability to design such product candidates with the properties that we desire; or
- potential product candidates may, on further study, be shown to have harmful side effects or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance.

Research programs to identify new product candidates require substantial technical, financial and human resources. If we are unable to identify suitable additional candidates for preclinical and clinical development, our opportunities to successfully develop and commercialize therapeutic products will be limited.

The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming, expensive, and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for THIO or any other candidates, our business will be substantially harmed.

The time required to obtain approval by the FDA and comparable foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations or the type and amount of clinical data necessary to gain approval may change during the course of a candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for any product candidate and it is possible that we will never obtain regulatory approval for THIO or any other candidates. We are not permitted to market any of our product candidates in the United States until we receive regulatory approval of a NDA from the FDA. Our ability to obtain approval by the FDA or other regulatory authorities can be adversely impacted for various reasons including:

- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a candidate is safe and effective for its proposed indication;
- serious and unexpected drug-related side effects experienced by participants in our clinical trials or by individuals using drugs similar to our candidates, or other products containing the active ingredient in our candidates;
- negative or ambiguous results from our clinical trials or results that may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a candidate's clinical and other benefits outweigh its safety risks;
- the FDA or 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 development candidates may not be acceptable or sufficient to support the submission of an NDA or other submission or to obtain regulatory approval in the United States or elsewhere, and we may be required to conduct additional clinical trials;
- the FDA or comparable foreign authorities may disagree regarding the formulation, labeling and/or the specifications of our candidates;
- the FDA or comparable foreign regulatory authorities may fail to approve or find deficiencies with the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies;
- the FDA or comparable foreign regulatory authorities may inspect and find deficiencies at the clinical trial sites we use to conduct our clinical studies; and
- 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.

Prior to obtaining approval to commercialize a candidate in the United States or abroad, we must demonstrate with substantial evidence from well-controlled clinical trials, and to the satisfaction of the FDA or foreign regulatory agencies, that such candidates are safe and effective for their intended uses. Results from preclinical studies and clinical trials can be interpreted in different ways. Even if we believe the preclinical or clinical data for our candidates are promising, such data may not be sufficient to support approval by the FDA and other regulatory authorities. The planned THIO-101 phase 2 trial is intended to be a proof-of-concept trial that may be expanded depending on interim results and includes both primary and secondary endpoints consistent with previously approved medicines. If THIO achieves its intended effects and does not exhibit unacceptable safety risks, we plan to seek accelerated approval of THIO based on positive results of the expanded phase 2 THIO-101 trial, followed by full approval based on the results of a single phase 3 clinical study, as opposed to the traditional approach of conducting two or more phase 3 studies. Even if granted, accelerated approval status does not guarantee an accelerated review or marketing approval by the FDA. A single-study approach is permissible in certain circumstances, particularly in oncology, but such circumstances are exceptional and FDA may not agree with that proposed approach, and thus we may be required to conduct two phase 3 trials.

The FDA or any foreign regulatory bodies can delay, limit or deny approval of our candidates or require us to conduct additional preclinical or clinical testing or abandon a program for many reasons, including:

- the FDA or comparable foreign regulatory authorities may disagree with the adequacy of the design or implementation of our clinical trials;
- the FDA or comparable foreign regulatory authorities may disagree with our safety interpretation of our drug;
- the FDA or comparable foreign regulatory authorities may disagree with our efficacy interpretation of our drug; or
- the FDA or comparable foreign regulatory authorities may regard our CMC package as inadequate, and more particularly:
- if our NDA does not include adequate tests by all methods reasonably applicable to show whether or not such drug is safe for use under the conditions prescribed, recommended, or suggested in the proposed labeling thereof;
- if the results of such tests show that such drug is unsafe for use under such conditions or do not show that such drug is safe for use under such conditions;
- if the methods used in, and the facilities and controls used for, the manufacture, processing, and packing of such drug are inadequate to preserve its identity, strength, quality, and purity;
- if the FDA determines that it has insufficient information to determine whether such drug is safe for use under such conditions;
- if based on information we submit and any other information before the FDA, the FDA determines there is a lack of substantial evidence that the drug will have the effect it purports or is represented to have under the conditions of use prescribed, recommended, or suggested in the proposed labeling thereof; or
- if the FDA determines that our labeling is false or misleading in any particular way.

Of the large number of drugs that enter clinical development, only a small percentage successfully complete the regulatory approval processes and are approved and commercialized. This lengthy approval process, as well as the unpredictability of future clinical trial results, may result in our failing to obtain regulatory approval to market THIO or any other candidates, which would significantly harm our business, results of operations and prospects.

In addition, the FDA or an applicable foreign regulatory agency also may approve a product candidate for a more limited indication or patient population than we originally requested, the FDA or foreign regulatory agency 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, or may require warnings, other safety-related labeling information, or impose post-market safety requirements, including distribution restrictions, that negatively impact the commercial potential of the drug. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

Enrollment and retention of patients in clinical trials is an expensive and time-consuming process and could be made more difficult or rendered impossible by multiple factors outside our control.

The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the study until its conclusion. We may encounter delays in enrolling, or be unable to enroll, a sufficient number of patients to complete any of our clinical trials, and even once enrolled, we may be unable to retain a sufficient number of patients to complete any of our trials. Patient enrollment and retention in clinical trials depends on many factors, including:

- the patient eligibility criteria defined in the protocol;
- the size of the patient population required for analysis of the trial's primary endpoints;
- the nature of the trial protocol;
- the existing body of safety and efficacy data with respect to the product candidate;
- the proximity of patients to clinical sites;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating;
- competing clinical trials being conducted by other companies or institutions;
- our ability to maintain patient consents;
- the risk that patients enrolled in clinical trials will drop out of the trials before completion; and
- delays or difficulties in enrollment and completion of studies due to the COVID 19 pandemic.

Results of preclinical studies, early clinical trials or analyses may not be indicative of results obtained in later trials.

The results of preclinical studies, early clinical trials or analyses of our product candidates may not be predictive of the results of later-stage clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier trials. In addition, conclusions based on promising data from analyses of clinical results may be shown to be incorrect when implemented in prospective clinical trials. Even if our clinical trials for THIO are completed as planned, we cannot be certain that their results will support the safety and efficacy sufficient to obtain regulatory approval.

Serious adverse events or undesirable side effects caused by THIO or any other 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 other comparable foreign authorities. Results of any clinical trial we conduct could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics. THIO has been previously evaluated in at least 19 clinical studies both as monotherapy and in combination with other therapies in multiple solid tumors and hematologic malignancies. A classic treatment strategy was used where patients were treated to maximum tolerated dose (MTD). Dose-limiting reversible toxicities were mainly hematologic (leukopenia, thrombocytopenia), gastrointestinal (nausea, vomiting) and generalized skin rashes; increases in blood urea nitrogen, creatinine, aspartate aminotransferase, alanine transaminase, and bilirubin were also recorded (Douglass, 1979; Gagliano, 1981; Higgins, 1985). The available data provides substantial information on the safety profile of THIO in over 600 subjects (adult and pediatric) at doses significantly higher than those intended for investigation in the current program.

If unacceptable side effects arise in the development of our candidates, we, the FDA or the IRBs at the institutions in which our studies are conducted, or the DSMB, if constituted for our clinical trials, could recommend a suspension or termination of our clinical trials, or the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of a product candidate for any or all targeted indications. In addition, drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete a trial or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff. We expect to have to train medical personnel using our development candidates to understand the side effect profiles for our clinical trials

and upon any commercialization of any of our product candidates. Inadequate training in recognizing or managing the potential side effects of our product candidates could result in patient injury or death. Any of these occurrences may harm our business, financial condition and prospects significantly.

Additionally, if one or more of our product candidates receives marketing approval, and we or others later identify undesirable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw approvals of such product;
- regulatory authorities may require additional warnings on the label, such as a "black box" warning or contraindication;
- additional restrictions may be imposed on the marketing of the particular product or the manufacturing processes for the product or any component thereof;
- we may be required to implement a Risk Evaluation and Mitigation Strategy, or REMS, or create a medication guide outlining the risks of such side effects for distribution to patients;
- we could be sued and held liable for harm caused to patients;
- the product may become less competitive; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of a product candidate, if approved, and could significantly harm our business, results of operations and prospects.

The market opportunities for THIO, if approved, may be smaller than we anticipate.

We expect to initially seek approval for THIO for use as a priming treatment in combination with the immune check point inhibitor cemiplimab in non-small cell lung cancer ("NSCLC") in the United States. Our estimates of market potential have been derived from a variety of sources, including scientific literature, patient foundations and primary and secondary market research, and may prove to be incorrect. Even if we obtain significant market share for any product candidate, if approved, if the potential target populations are small, we may never achieve profitability without obtaining marketing approval for additional indications.

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

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 development candidates or may conclude after review of our data that our application is insufficient to obtain marketing approval of our development candidates. If the FDA does not accept or approve our NDAs for our development 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 development 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.

Development of THIO could take longer, be more expensive, or become impractical if the FDA requires the use of an FDA-approved companion diagnostic test in conjunction with treatment with THIO.

THIO is active in cells that are telomerase positive (TERT+). The status of a tumor as being TERT+ can only be established by use of an in vitro test of the tumor cells. While experimental versions of such tests currently exist, none to date have received FDA approval. Under current FDA Guidances, for drugs and therapeutic biologics where the use of a specific diagnostic test is essential for the safe and effective use of the therapeutic product, such as when the use of a product is limited to a specific patient subpopulation that can be identified by using the test, the FDA

generally will not approve the therapeutic product if a relevant "companion diagnostic" test is not also approved or cleared for the appropriate indication. As stated in its Guidances, the FDA may decide that it is appropriate to approve such a therapeutic product without an approved or cleared *in vitro* companion diagnostic device when the drug or therapeutic biologic is intended to treat a serious or life-threatening condition for which no satisfactory alternative treatment exists and the FDA determines that the benefits from the use of a product with an unapproved or uncleared *in vitro* companion diagnostic device are so pronounced as to outweigh the risks from the lack of an approved or cleared *in vitro* companion diagnostic device. Although the vast majority of cancers are TERT+, the FDA may determine that THIO can only be approved (if at all) for patients whose cancer has been confirmed to be TERT+ through use of an FDA-approved companion diagnostic. If the FDA were to take such a position, the development and potential approval and commercialization of THIO would take longer, be more expensive, and could become impractical.

Even if we obtain FDA approval for THIO or any other candidates in the United States, we may never obtain approval for or commercialize THIO or any other development candidate in any other jurisdiction, which would limit our ability to realize their full global market potential.

In order to market any products in any particular jurisdiction, we must establish and comply with numerous and varying regulatory requirements on a country-by-country basis regarding safety and efficacy. Approval by the FDA in the United States does not ensure approval by regulatory authorities in other countries or jurisdictions. However, the failure to obtain approval in one jurisdiction may negatively impact our ability to obtain approval elsewhere. In addition, clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not guarantee regulatory approval in any other country.

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

Even if we obtain regulatory approval for THIO or any development candidate, we will still face extensive and ongoing regulatory requirements and obligations and any development candidates, if approved, may face future development and regulatory difficulties.

Any candidate for which we obtain marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, packaging, distribution, adverse event reporting, storage, recordkeeping, export, import, advertising and promotional activities for such product, among other things, will be subject to extensive and ongoing requirements of and review by the FDA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, establishment registration and drug listing requirements, continued compliance with current Good Manufacturing Practice, or cGMP, requirements relating to manufacturing, quality control, quality assurance and corresponding maintenance of records and documents, requirements regarding the distribution of samples to physicians and recordkeeping and Good Clinical Practice, or GCP, requirements for any clinical trials that we conduct post-approval.

Even if marketing approval of a product candidate is granted, the approval may be subject to limitations on the indicated uses for which the product candidate may be marketed or to the conditions of approval, including a requirement to implement a REMS. If any of our product candidates receive marketing approval, the accompanying label may limit the approved indicated use of the product candidate, which could limit sales of the product candidate. The FDA may also impose requirements for costly post-marketing studies or clinical trials and surveillance to monitor the safety or efficacy of a product. The FDA closely regulates the post-approval marketing and promotion of drugs to ensure drugs are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA imposes stringent restrictions on

manufacturers' communications regarding off-label use, and if we market our products for uses beyond their approved indications, we may be subject to enforcement action for off-label marketing. Violations of the Federal Food, Drug, and Cosmetic Act, or FDCA, relating to the promotion of prescription drugs may lead to FDA enforcement actions and investigations alleging violations of federal and state healthcare fraud and abuse laws, as well as state consumer protection laws.

In addition, later discovery of previously unknown adverse events or other problems with our products, manufacturers or manufacturing processes or failure to comply with regulatory requirements, may yield various results, including:

- restrictions on manufacturing such products;
- restrictions on the labeling or marketing of products;
- restrictions on product distribution or use;
- requirements to conduct post-marketing studies or clinical trials;
- warning letters or untitled letters;
- withdrawal of the products from the market;
- refusal to approve pending applications or supplements to approved applications that we submit;
- recall of products;
- fines, restitution or disgorgement of profits or revenues;
- suspension or withdrawal of marketing approvals;
- refusal to permit the import or export of our products;
- product seizure; and
- injunctions or the imposition of civil or criminal penalties.

Further, the FDA's 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, which would adversely affect our business, prospects and ability to 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 may seek a Breakthrough Therapy designation for THIO from the FDA. However, we might not seek such designation or be granted the designation by the FDA if sought, and even if we are granted the designation, it may not lead to a faster development or regulatory review or approval process.

We may seek a Breakthrough Therapy designation for THIO or one or more of our other candidates. Breakthrough Therapy designation is a process designed to expedite the development and review of drugs that are intended to treat a serious condition and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over available therapy on a clinically significant endpoint(s). For purposes of Breakthrough Therapy designation, clinically significant endpoint generally refers to an endpoint that measures an effect on irreversible morbidity or mortality (IMM) or on symptoms that represent serious consequences of the disease. A clinically significant endpoint can also refer to findings that suggest an effect on IMM or serious symptoms. For drugs that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Drugs designated as breakthrough therapies by the FDA may also be eligible for fast track designation (under a separate request), priority review, or accelerated approval, if supported by clinical data at the time the NDA is submitted to the FDA. FDA encourages a Breakthrough Therapy designation request to be submitted, and received by FDA, no later than the end-of-phase-2 meetings. Even if granted, accelerated approval status does not guarantee an accelerated review or marketing approval by the FDA.

Designation as a Breakthrough Therapy is within the discretion of the FDA both at the time of the submission of such a request, and during FDA's review of the drug and supporting data. Even if we believe that one of our candidates meets the criteria for designation as a Breakthrough Therapy, the FDA may disagree and instead determine not to make such designation or may grant such a designation and subsequently rescind the designation prior to approval. Even if we receive and maintain Breakthrough Therapy designation, the receipt of such designation for a product candidate may not result in

a faster development or regulatory review or approval process compared to drugs considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that the product candidates no longer meet the conditions for qualification or decide that the time period for FDA review or approval will not be shortened. Potential product liability lawsuits against us could cause us to incur substantial liabilities and limit commercialization of any products that we may develop.

The use of THIO or any other candidates we may develop in clinical trials and the sale of any products for which we obtain marketing approval exposes us to the risk of product liability claims. Product liability claims might be brought against us by patients, healthcare providers, pharmaceutical companies or others selling or otherwise coming into contact with our products. On occasion, large judgments have been awarded in class action lawsuits based on drugs that had unanticipated adverse effects. If we cannot successfully defend against product liability claims, we could incur substantial liability and costs. In addition, regardless of merit or eventual outcome, product liability claims may result in:

- impairment of our business reputation and significant negative media attention;
- withdrawal of participants from our clinical trials;
- significant costs to defend the litigation;
- distraction of management's attention from our primary business;
- substantial monetary awards to patients or other claimants;
- inability to commercialize THIO or any other product candidate;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- decreased market demand for any product; and
- loss of revenue.

The product liability insurance coverage we plan to acquire in the future may not be sufficient to reimburse us for any expenses or losses we may suffer. We intend to acquire insurance coverage to include larger clinical studies, different countries and the potential sale of commercial products; however, we may be unable to obtain product liability insurance on commercially reasonable terms or in adequate amounts. A successful product liability claim, or series of claims, brought against us could cause our share price to decline and, if judgments exceed our insurance coverage, could adversely affect the results of our operations and business, including preventing or limiting the commercialization of any product candidates we develop.

Risks Related to Commercialization

We face significant competition from other biotechnology and pharmaceutical companies and our operating results will suffer if we fail to compete effectively.

The biopharmaceutical and pharmaceutical industries are highly competitive and subject to significant and rapid technological change. Our success is highly dependent on our ability to acquire, develop, and obtain marketing approval for new products on a cost-effective basis and to market them successfully. If THIO is approved, we will face intense competition from a variety of businesses, including large, fully integrated pharmaceutical companies, specialty pharmaceutical companies and biopharmaceutical companies in the United States and other jurisdictions. These organizations may have significantly greater resources than we do and may conduct similar research; seek patent protection; and establish collaborative arrangements for research, development, manufacturing and marketing of products that may compete with us.

Our competitors may, among other things:

- have significantly greater name recognition, financial, manufacturing, marketing, drug development, technical, and human resources than we do, and future mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors;
- develop and commercialize products that are safer, more effective, less expensive, more convenient, or easier to administer, or have fewer or less severe effects;
- obtain quicker regulatory approval;

- implement more effective approaches to sales and marketing; or
- form more advantageous strategic alliances.

Smaller and other early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel; establishing clinical trial sites and patient registration; and in acquiring technologies complementary to, or necessary for, our programs. Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are more effective, have fewer or less severe side effects, or are more convenient or are less expensive than THIO. Our competitors may also obtain FDA or other regulatory approval for their product candidates more rapidly than we may obtain approval for THIO, which could result in our competitors establishing or strengthening their market position before we are able to enter the market.

We may face early generic competition for THIO or our other products.

Pharmaceutical companies developing novel products face intense competition from generic drug manufacturers who aggressively seek to challenge patents and non-patent exclusivities for branded products, and who are able to use much less-onerous product development and FDA approval pathways for their generic products. The active ingredient of THIO was extensively tested as early as the 1970s and we intend to rely in part on the clinical data previously developed for the drug in support of an NDA for THIO. Generic drug applicants and other competitors may be able to similarly rely upon the prior clinical data in support of efforts to gain approval of competing products using the same active ingredient as THIO. If one or more such competitors complete development and seek and obtain regulatory approval before we do, our ability to obtain approval of and market THIO may be delayed.

Under the FDA's generic drug approval processes, described in more detail in the section titled "Hatch-Waxman and Generic Competition," we believe that THIO, if approved before any other application for a drug containing the same active ingredient, may be eligible for a five-year regulatory exclusivity period known as new chemical entity, or NCE Exclusivity, which would delay FDA review and approval of a competing product application that relies in whole or in part upon the FDA's approval of THIO, but such exclusivity is only determined by the FDA after a drug is approved and the FDA may determine that THIO is not eligible for NCE Exclusivity, or that approval of THIO must be delayed due to another applicant's relevant exclusivity. A new drug may, upon approval of its initial NDA or approval of supplemental NDAs, qualify for a three-year exclusivity period during which no generic version could be approved for the specific conditions of use covered by such exclusivity. Three-year exclusivity does not prevent FDA approval of another drug with the same active ingredient for a different indication or other conditions of use not protected by the exclusivity. Even if a competing version of THIO was approved with a different indication or condition of use, physicians would be free to prescribe such drug for uses that are covered by our regulatory exclusivity, if any.

The successful commercialization of THIO and any other candidate we develop will depend in part on the extent to which governmental authorities and health insurers establish adequate coverage, reimbursement levels, and pricing policies. Failure to obtain or maintain coverage and adequate reimbursement for our candidates, if approved, could limit our ability to market those products and decrease our ability to generate revenue.

The availability and adequacy of coverage and reimbursement by governmental healthcare programs such as Medicare and Medicaid, private health insurers and other third-party payors are essential for most patients to be able to afford prescription medications such as THIO, if approved. Our ability to achieve acceptable levels of coverage and reimbursement for products by governmental authorities, private health insurers and other organizations will have an effect on our ability to successfully commercialize our drug and any other product candidates we develop. Assuming we obtain coverage for our product candidates by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. We cannot be sure that coverage and reimbursement in the United States or elsewhere will be available for our product candidates or any product that we may develop, and any reimbursement that may become available may be decreased or eliminated in the future.

There is significant uncertainty related to the insurance coverage and reimbursement of newly approved products. In the United States, third-party payors, including private and governmental payors, such as the

Medicare and Medicaid programs, play an important role in determining the extent to which new drugs and biologics will be covered. The Medicare and Medicaid programs increasingly are used as models in the United States for how private payors and other governmental payors develop their coverage and reimbursement policies for drugs and biologics. Some third-party payors may require pre-approval of coverage for new or innovative devices or drug therapies before they will reimburse healthcare providers who use such therapies. It is difficult to predict at this time what third-party payors will decide with respect to the coverage and reimbursement for our product candidates.

No uniform policy for coverage and reimbursement for products exists among third-party payors in the United States. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Furthermore, rules and regulations regarding reimbursement change frequently, in some cases at short notice, and we believe that changes in these rules and regulations are likely.

Third-party payors increasingly are challenging prices charged for pharmaceutical products and services, and many third-party payors may refuse to provide coverage and reimbursement for particular drugs or biologics when a comparable alternative drug, an equivalent generic drug, a biosimilar, or a less expensive therapy is available. It is possible that a third-party payor may consider our product candidates as alternatives to less expensive drugs and offer to reimburse patients only for the less expensive product. Even if we show improved efficacy or improved convenience of administration with our product candidates, pricing of existing drugs may limit the amount we will be able to charge for our product candidates. These payors may deny or revoke the reimbursement status of a given product or establish prices for new or existing marketed products at levels that are too low to enable us to realize an appropriate return on our investment in our product candidates. If reimbursement is not available or is available only at limited levels, we may not be able to successfully commercialize our product candidates and may not be able to obtain a satisfactory financial return on our product candidates.

We may also be subject to extensive governmental price controls and other market regulations outside of the United States, and we believe the increasing emphasis on cost-containment initiatives in other countries have and will continue to put pressure on the pricing and usage of medical products. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. Other countries allow companies to fix their own prices for medical 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 product candidates may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

Moreover, increasing efforts by governmental and third-party payors in the United States to cap or reduce healthcare costs may cause such organizations to limit both coverage and the level of reimbursement for newly approved products and, as a result, they may not cover or provide adequate payment for our product candidates. We expect to experience pricing pressures in connection with the sale of our product candidates due to the trend toward managed health care, the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, particularly prescription drugs and biologics and surgical procedures and other treatments, has become intense. As a result, increasingly high barriers are being erected to the entry of new products.

Even if THIO or any candidate we develop receives marketing approval, it may fail to achieve market acceptance by physicians, patients, third-party payors or others in the medical community necessary for commercial success.

If THIO or any candidate we develop receives marketing approval, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. If it does not achieve an adequate level of acceptance, we may not generate significant product revenues or become profitable. The degree of market acceptance of our product candidates, if approved, will depend on a number of factors, including but not limited to:

- the efficacy and potential advantages compared to alternative treatments;
- effectiveness of sales and marketing efforts;
- the cost of treatment in relation to alternative treatments, including any similar generic treatments;
- our ability to offer our products for sale at competitive prices;
- the convenience and ease of administration compared to alternative treatments;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support;
- the availability of third-party coverage and adequate reimbursement;
- the prevalence and severity of any side effects; and
- any restrictions on the use of our product together with other medications.

Because we expect sales of our product candidates, if approved, to generate substantially all of our revenues for the foreseeable future, the failure of our product candidates to find market acceptance would harm our business and could require us to seek additional financing.

If we are unable to establish sales, marketing and distribution capabilities either on our own or in collaboration with third parties, we may not be successful in commercializing THIO, if approved.

We do not have any infrastructure for the sales, marketing or distribution of THIO, or compliance functions related to such activities, and the cost of establishing and maintaining such an organization may exceed the cost-effectiveness of doing so. In order to market and successfully commercialize our drug or any product candidate we develop, if approved, we must build our sales, distribution, marketing, managerial, compliance, and other non-technical capabilities or make arrangements with third parties to perform these services. We expect to build a focused sales, distribution and marketing infrastructure to market THIO, if approved, in the United States, with expected licenses in other countries and regions, including large markets such as Japan and Europe. There are significant expenses and risks involved with establishing our own sales, marketing and distribution capabilities, including our ability to hire, retain and appropriately incentivize qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel, oversee the compliance of sales and marketing functions, and effectively manage a geographically dispersed sales and marketing team. Any failure or delay in the development of our internal sales, marketing, distribution and compliance capabilities could delay any product launch, which would adversely impact the commercialization of that product. For example, if the commercial launch of THIO for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

Factors that may inhibit our efforts to commercialize our product candidates on our own include, but are not limited to:

- our inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians or attain adequate numbers of physicians to prescribe our products; and
- unforeseen costs and expenses associated with creating an independent sales and marketing organization.

We do not anticipate having the resources in the foreseeable future to allocate to the sales and marketing of our product candidates, if approved, in certain markets overseas. Therefore, our future success will depend, in part, on our ability to enter into and maintain collaborative relationships for such capabilities, the collaborator's strategic interest in a product and such collaborator's ability to successfully market and sell the product. We intend to pursue collaborative arrangements regarding the sale and marketing of THIO, if approved, for certain markets overseas; however, we cannot assure you that we will be able to establish or maintain such collaborative arrangements, or if able to do so, that they will have effective sales forces. To the extent that we depend on third parties for marketing and distribution, any revenues we receive will depend upon the efforts of such third parties, and there can be no assurance that such efforts will be successful.

If we are unable to build our own sales force or negotiate a collaborative relationship for the commercialization of THIO, we may be forced to delay the potential commercialization of the drug or reduce the scope of our sales or marketing activities. If we need to increase our expenditures to fund commercialization activities for THIO we will need to obtain additional capital, which may not be available to us on acceptable terms, or at all. We may also have to enter into collaborative arrangements for THIO at an earlier stage than otherwise would be ideal and we may be required to relinquish rights to it or otherwise agree to terms unfavorable to us. Any of these occurrences may have an adverse effect on our business, operating results and prospects.

If we are unable to establish adequate sales, marketing and distribution capabilities, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates and may never become profitable. We will be competing with many companies that currently have extensive and well-funded marketing and sales operations. Without an internal team or the support of a third party to perform marketing and sales functions, we may be unable to compete successfully against these more established companies.

A variety of risks associated with operating internationally could materially adversely affect our business.

In July 2021, we established a wholly owned Australian subsidiary, MAIA Biotechnology Australia Pty Ltd, to conduct various pre-clinical and clinical activities for the development of our product candidates. Additionally, our business strategy includes potentially expanding further internationally if any of our product candidates receive regulatory approval. Doing business internationally involves a number of risks, including but not limited to:

- multiple, conflicting and changing laws and regulations, such as privacy regulations, tax laws, export and import restrictions, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- failure by us to obtain and maintain regulatory approvals for the use of our products in various countries;
- additional potentially relevant third-party patent rights;
- complexities and difficulties in obtaining protection and enforcing our intellectual property;
- difficulties in staffing and managing foreign operations;
- complexities associated with managing multiple payor reimbursement regimes, government payors or patient self-pay systems;
- limits in our ability to penetrate international markets;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our products and exposure to foreign currency exchange rate fluctuations;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, outbreak of disease, boycotts, curtailment of trade and other business restrictions;
- certain expenses including, among others, expenses for travel, translation and insurance; and
- regulatory and compliance risks that relate to maintaining accurate information and control over sales and activities that may fall within the purview of the U.S. Foreign Corrupt Practices Act, its books and records provisions, or its anti-bribery provisions.

Any of these factors could significantly harm any future international expansion and operations and, consequently, our results of operations.

Risks Related to Our Dependence on Third Parties

Our employees and independent contractors, including principal investigators, clinical trial sites, contract research organizations ("CROs"), consultants, vendors, and any third parties we may engage in connection with development and commercialization, may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have a material adverse effect on our business.

Our employees and independent contractors, including principal investigators, clinical trial sites, consultants, vendors and any third parties we may engage in connection with development and commercialization of our product candidates, could engage in misconduct, including intentional, reckless or negligent conduct or unauthorized activities that violate: the laws and regulations of the FDA or other similar regulatory requirements of other authorities, including those laws that require the reporting of true, complete and accurate information to such authorities; manufacturing standards; data privacy, security, fraud and abuse and other healthcare laws and regulations; or laws that require the reporting of true, complete and accurate financial information and data. Specifically, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Activities subject to these laws could also involve the improper use or misrepresentation of information obtained in the course of clinical trials, creation of fraudulent data in preclinical studies or clinical trials or illegal misappropriation of drug product, which could result in regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter misconduct by employees and other third 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 such laws or regulations. Additionally, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred. 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 and results of operations, including the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, disgorgements, possible exclusion from participation in Medicare, Medicaid, other U.S. federal healthcare programs or healthcare programs in other jurisdictions, individual imprisonment, other sanctions, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations.

We currently rely on third-party contract manufacturing organizations, or CMOs, for the production of clinical supply of THIO and intend to rely on CMOs for the production of commercial supply of THIO, if approved. Our dependence on CMOs may impair the development and commercialization of the drug, which would adversely impact our business and financial position.

We have limited personnel with experience in manufacturing, and we do not own facilities for manufacturing. Instead, we rely on and expect to continue to rely on CMOs for the supply of cGMP grade clinical trial materials and commercial quantities of THIO and any candidates we develop, if approved. Reliance on CMOs may expose us to more risk than if we were to manufacture our product candidates ourselves. We intend to have manufactured a sufficient clinical supply of THIO drug substance to enable us to complete our clinical trials, and we have also engaged a CMO to provide clinical and commercial supply of the drug product.

The facilities used to manufacture our product candidates must be inspected by the FDA and comparable foreign authorities. While we provide oversight of manufacturing activities, we do not and will not control the execution of manufacturing activities by, and are or will be essentially dependent on, our CMOs for compliance with cGMP requirements for the manufacture of our product candidates. As a result, we are subject to the risk that our product candidates may have manufacturing defects that we have limited ability to prevent. If a CMO cannot successfully manufacture material that conforms to our specifications and the regulatory requirements, we will not be able to secure or maintain regulatory approval for the use of our product candidates in clinical trials, or for commercial distribution of our product candidates, if approved. In addition, we have limited control over the ability of our CMOs to maintain adequate quality control, quality assurance

and qualified personnel. If the FDA or comparable foreign regulatory authority finds deficiencies with or does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval or finds deficiencies in the future, we may need to find alternative manufacturing facilities, which would delay our development program and significantly impact our ability to develop, obtain regulatory approval for or commercialize our product candidates, if approved. In addition, any failure to achieve and maintain compliance with these laws, regulations and standards could subject us to the risk that we may have to suspend the manufacture of our product candidates or that obtained approvals could be revoked. Furthermore, CMOs may breach existing agreements they have with us because of factors beyond our control. They may also terminate or refuse to renew their agreement at a time that is costly or otherwise inconvenient for us. If we were unable to find an adequate CMO or another acceptable solution in time, our clinical trials could be delayed, or our commercial activities could be harmed.

We rely on and will continue to rely on CMOs to purchase from third-party suppliers the raw materials necessary to produce our product candidates. We do not and will not have control over the process or timing of the acquisition of these raw materials by our CMOs. Moreover, we currently do not have any agreements for the production of these raw materials. Supplies of raw material could be interrupted from time to time and we cannot be certain that alternative supplies could be obtained within a reasonable timeframe, at an acceptable cost, or at all. In addition, a disruption in the supply of raw materials could delay the commercial launch of our product candidates, if approved, or result in a shortage in supply, which would impair our ability to generate revenues from the sale of our product candidates. Growth in the costs and expenses of raw materials may also impair our ability to cost effectively manufacture our product candidates. There are a limited number of suppliers for the raw materials that we may use to manufacture our product candidates and we may need to assess alternative suppliers to prevent a possible disruption of the manufacture of our product candidates.

Finding new CMOs or third-party suppliers involves additional cost and requires our management's time and focus. In addition, there is typically a transition period when a new CMO commences work. Although we generally have not, and do not intend to, begin a clinical trial unless we believe we have on hand, or will be able to obtain, a sufficient supply of our product candidates to complete the clinical trial, any significant delay in the supply of our product candidates or the raw materials needed to produce our product candidates, could considerably delay conducting our clinical trials and potential regulatory approval of our product candidates.

As part of their manufacture of our product candidates, our CMOs and third-party suppliers are expected to comply with and respect the proprietary rights of others. If a CMO or third-party supplier fails to acquire the proper licenses or otherwise infringes the proprietary rights of others in the course of providing services to us, we may have to find alternative CMOs or third-party suppliers or defend against claims of infringement, either of which would significantly impact our ability to develop, obtain regulatory approval for or commercialize our product candidates, if approved.

We intend to rely on third parties to conduct, supervise and monitor our clinical trials. If those third parties do not successfully carry out their contractual duties, or if they perform in an unsatisfactory manner, it may harm our business.

We rely, and will continue to rely, on CROs, CRO-contracted vendors and clinical trial sites to ensure the proper and timely conduct of our clinical trials, including our Phase 2 trials of THIO. Our reliance on CROs for clinical development activities limits our control over these activities, but we remain responsible for ensuring that each of our trials is conducted in accordance with the applicable protocol and legal, regulatory and scientific standards.

We and our CROs will be required to comply with the good laboratory practice requirements for our preclinical studies and GCP requirements for our clinical trials, which are regulations and guidelines enforced by the FDA and are also required by comparable foreign regulatory authorities. Regulatory authorities enforce GCP requirements through periodic inspections of trial sponsors, principal investigators and clinical trial sites. If we or our CROs fail to comply with GCP requirements, 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 requirements. In addition, our clinical trials must be conducted with product produced under cGMP requirements. Accordingly, if our CROs fail to comply with these requirements, we may be required to repeat clinical trials, which would delay the regulatory approval process.

Our CROs are not our employees, and we do not control whether or not they devote sufficient time and resources to our clinical trials. Our CROs may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials, or other drug development activities, which could harm our competitive position. We face the risk of potential unauthorized disclosure or misappropriation of our intellectual property by CROs, which may reduce our trade secret protection and allow our potential competitors to access and exploit our proprietary technology. If our CROs do not successfully carry out their contractual duties or obligations, fail to meet expected deadlines, or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for any other reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval for, or successfully commercialize any product candidate that we develop. As a result, our financial results and the commercial prospects for any product candidate that we develop would be harmed, our costs could increase, and our ability to generate revenue could be delayed.

If our relationship with any CROs terminate, we may not be able to enter into arrangements with alternative CROs or do so on commercially reasonable terms. Switching or adding additional CROs involves substantial cost and requires management's 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. Though we intend to carefully manage our relationships with our CROs, there can be no assurance that we will not encounter challenges or delays in the future or that these delays or challenges will not have an adverse impact on our business, financial condition and prospects.

The number and type of our collaborations could adversely affect our attractiveness to future collaborators or acquirers and the loss of, or a disruption in our relationship with, any one or more collaborators could harm our business.

If any collaborations do not result in the successful development and commercialization of products or if one of our collaborators terminates its agreement with us, we may not receive any future research and development funding or milestone or royalty payments under such collaborations. If we do not receive the funding we expect under these agreements, our continued development of our product candidates could be delayed, and we may need additional resources to develop additional product candidates. All of the risks relating to product development, regulatory approval and commercialization described in this prospectus also apply to the activities of any collaborators and there can be no assurance that our collaborations will produce positive results or successful products on a timely basis or at all.

In addition, subject to its contractual obligations to us, if one of our collaborators is involved in a business combination or otherwise changes its business priorities, the collaborator might deemphasize or terminate the development or commercialization of our product candidates. If a collaborator terminates its agreement with us, we may find it more difficult to attract new collaborators and the perception of our business and our stock price could be adversely affected.

We may in the future collaborate with additional pharmaceutical and biotechnology companies for development and potential commercialization of therapeutic products. We face significant competition in seeking appropriate collaborators. Our ability to 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. If we are unable to reach agreements with suitable collaborators on a timely basis, on acceptable terms, or at all, 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 fund and undertake development or commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms or at all. If we fail to enter into collaborations and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to further develop our product candidates or bring them to market or continue to develop our programs, and our business may be materially and adversely affected.

Risks Related to Healthcare Laws and Other Legal Compliance Matters

Enacted and future healthcare legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize our development candidates, if approved, and may affect the prices we may set.

In the United States and other jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect our future results of operations. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare. For example, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA, has substantially changed the way healthcare is financed by both governmental and private insurers. Among the provisions of the ACA, those of greatest importance to the pharmaceutical and biotechnology industries include the following:

- an annual, non-deductible fee payable by any entity that manufactures or imports certain branded prescription drugs and biologic agents (other than those designated as orphan drugs), which is apportioned among these entities according to their market share in certain government healthcare programs;
- a Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 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;
- requirements to report certain financial arrangements with physicians and teaching hospitals, including reporting "transfers of value" made or distributed to prescribers and other healthcare providers and reporting investment interests held by physicians and their immediate family members;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;
- a methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs and biologics that are inhaled, infused, instilled, implanted, or injected;
- extension of a manufacturer's Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs thereby potentially increasing a manufacturer's Medicaid rebate liability;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- establishment of a Center for Medicare Innovation at the Centers for Medicare & Medicaid Services, or CMS, to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending;
- expansion of the entities eligible for discounts under the Public Health Service program; and
- a licensure framework for follow on biologic products.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future. It is uncertain the extent to which any such changes may impact our business or financial condition.

Other legislative changes have been proposed and adopted in the United States since the ACA was enacted. For example, the Budget Control Act of 2011, resulted in aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect in April 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2027 unless additional action is taken by Congress. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. Additionally, the orphan drug tax credit was reduced as part of a broader tax reform. These new laws or any other similar laws introduced in the future may result in additional reductions in Medicare and other health care funding, which could negatively affect our customers and accordingly, our financial operations.

In addition, there has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been Congressional inquiries and proposed federal and state legislation designed to bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs and reform government program reimbursement methodologies for drugs. Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. We expect that additional U.S. federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that the U.S. federal government will pay for healthcare products and services, which could result in reduced demand for our product candidates or additional pricing pressures.

Individual states in the United States have also become increasingly aggressive in passing legislation and implementing 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. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, results of operations, financial condition and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This could reduce the ultimate demand for our product candidates or put pressure on our product pricing.

In markets outside of the United States, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. We cannot predict the likelihood, nature, or extent of government regulation that may arise from future legislation or administrative action in the United States or any other jurisdiction. If we or any third parties we may engage are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or such third parties are not able to maintain regulatory compliance, our product candidates may lose any regulatory approval that may have been obtained and we may not achieve or sustain profitability.

Our business operations and current and future relationships with investigators, healthcare professionals, consultants, third-party payors, patient organizations, and customers will be subject to applicable healthcare regulatory laws, which could expose us to penalties.

Our business operations and current and future arrangements with investigators, healthcare professionals, consultants, third-party payors, patient organizations, and customers, may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations. These laws may constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, market, sell and distribute our product candidates, if approved. Such laws include:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving, or providing any remuneration (including any kickback, bribe, or certain rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, lease, order, or recommendation of, any good, facility, item, or service, for which payment may be made, in whole or in part, under U.S. federal and state healthcare programs such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. The U.S. federal Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other hand;
- the U.S. federal false claims and civil monetary penalties laws, including the civil False Claims Act, or FCA, which, among other things, impose criminal and civil penalties, including through civil whistleblower or *qui tam* actions, against individuals or entities for knowingly presenting, or causing to be presented, to the U.S. federal government, claims for payment or approval that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. federal government. In addition, the government

may assert that a claim including items and services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the FCA. A claim includes "any request or demand" for money or property presented to the federal government. In addition, manufacturers can be held liable under the FCA even when they do not submit claims directly to government payors if they are deemed to "cause" the submission of false or fraudulent claims;

- the U.S. federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the U.S. 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 of 2009, or HITECH, and their respective implementing regulations, which impose, among other things, specified requirements relating to the privacy, security and transmission of individually identifiable health information without appropriate authorization by covered entities subject to the rule, such as health plans, healthcare clearinghouses and healthcare providers as well as their business associates that perform certain services involving the use or disclosure of individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions;
- the FDCA, which prohibits, among other things, the adulteration or misbranding of drugs, biologics and medical devices;
- the U.S. federal legislation commonly referred to as the Physician Payments Sunshine Act and its implementing regulations, which requires certain manufacturers of drugs, devices, biologics, and medical supplies that are reimbursable under Medicare, Medicaid, or the Children's Health Insurance Program to report annually to the government information related to certain payments and other transfers of value to physicians and teaching hospitals, as well as ownership and investment interests held by the physicians described above and their immediate family members; and
- analogous U.S. state laws and regulations, including: state anti-kickback and false claims laws, which may apply to our business practices, including but not limited to, research, distribution, sales, and marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information, which requires tracking gifts and other remuneration and items of value provided to healthcare professionals and entities; and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available under such laws, it is possible that some of our business activities, including our consulting agreements and other relationships with physicians and other healthcare providers, some of whom receive stock or stock options as compensation for their services, could be subject to challenge under one or more of such laws. Ensuring that our current and future internal operations and business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations, agency guidance 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 the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to the imposition of civil, criminal and administrative penalties, damages, disgorgement, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, individual imprisonment, contractual damages, reputational harm, diminished profits and future earnings, additional reporting requirements or oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. If any of the physicians or other providers or entities with whom we expect to do business are found to not be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment, which could affect our ability to operate our business. Further, defending against any such actions can be costly, time-consuming and may require significant 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.

Any clinical trial programs we conduct or research collaborations we enter into in the European Economic Area may subject us to the General Data Protection Regulation.

If we conduct clinical trial programs or enter into research collaborations in the European Economic Area, or EEA, we may be subject to the General Data Protection regulation, or GDPR. The GDPR applies extraterritorially and implements stringent operational requirements for processors and controllers of personal data, including, for example, high standards for obtaining consent from individuals to process their personal data, robust disclosures to individuals, a comprehensive individual data rights regime, data export restrictions governing transfers of data from the EEA/European Union, or EU, to other jurisdictions, short timelines for data breach notifications, limitations on retention of information, increased requirements pertaining to health data, other special categories of personal data and coded data and additional obligations if we contract third-party processors in connection with the processing of personal data. The United Kingdom has implemented its own version of the GDPR, which contains similar requirements. The GDPR provides that EU member states may establish their own laws and regulations limiting the processing of personal data, including genetic, biometric or health data, which could limit our ability to use and share personal data or could cause our costs to increase. If our or our partners' or service providers' privacy or data security measures fail to comply with the GDPR requirements, we may be subject to litigation, regulatory investigations, enforcement notices requiring us to change the way we use personal data and/or fines of up to 20 million Euros or up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher, as well as compensation claims by affected individuals, negative publicity, reputational harm and a potential loss of business and goodwill.

We are subject to environmental, health and safety laws and regulations, and we may become exposed to liability and substantial expenses in connection with environmental compliance or remediation activities.

Our operations, including our development, testing and manufacturing activities, are subject to numerous environmental, health and safety laws and regulations. These laws and regulations govern, among other things, the controlled use, handling, release and disposal of and the maintenance of a registry for, hazardous materials and biological materials, such as chemical solvents, human cells, carcinogenic compounds, mutagenic compounds and compounds that have a toxic effect on reproduction, laboratory procedures and exposure to blood-borne pathogens. If we fail to comply with such laws and regulations, we could be subject to fines or other sanctions.

As with other companies engaged in activities similar to ours, we face a risk of environmental liability inherent in our current and historical activities, including liability relating to releases of or exposure to hazardous or biological materials. Environmental, health and safety laws and regulations are becoming more stringent. We may be required to incur substantial expenses in connection with future environmental compliance or remediation activities, in which case, the production efforts of our third-party manufacturers or our development efforts may be interrupted or delayed.

Recent legislation may materially adversely affect our financial condition, results of operations and cash flows.

Recently enacted U.S. tax legislation has significantly changed the U.S. federal income taxation of U.S. corporations, including by reducing the U.S. corporate income tax rate, limiting interest deductions, and revising the rules governing NOLs. Many of these changes are effective immediately, without any transition periods or grandfathering for existing transactions. The legislation is unclear in many respects and could be subject to potential amendments and technical corrections, as well as interpretations and implementing regulations by the Treasury and Internal Revenue Service, or the IRS, any of which could lessen or increase certain adverse impacts of the legislation. In addition, it is unclear how these U.S. federal income tax changes will affect state and local taxation, which often uses federal taxable income as a starting point for computing state and local tax liabilities.

The reduction of the corporate tax rate under the legislation may cause a reduction in the economic benefit of deferred tax assets available to us. Furthermore, under the legislation, although the treatment of tax losses generated before December 31, 2017, has generally not changed, tax losses generated in calendar year 2018 and beyond will only be able to offset 80% of taxable income. This change may require us to pay federal income taxes in future years despite generating a loss for federal income tax purposes in prior years.

While some of the changes made by the tax legislation may adversely affect us in one or more reporting periods and prospectively, other changes may be beneficial on a going-forward basis. We intend to work with our tax advisors and auditors to determine the full impact that the recent tax legislation as a whole will have on us. We urge our investors to consult with their legal and tax advisors with respect to such legislation.

Risks Related to Our Intellectual Property

We depend on license agreements with the University of Texas Southwestern, or UTSW, to permit us to use patents and patent applications, as well as to exploit specific technological know-how. Termination of these rights or the failure to comply with obligations under these agreements could materially harm our business and prevent us from developing or commercializing our product candidates.

We are a party to license agreements with UTSW under which we were granted rights to patents and patent applications, as well as proprietary technologies, that are important and necessary to our business. Our rights to use these patents and patent applications and employ the inventions claimed in these licensed patents, as well as the exploitation of proprietary technology, are subject to the continuation of, and our compliance with, the terms of our license agreements.

Our license agreements impose upon us various diligence, payment and other obligations, including the following:

- our obligation to pay UTSW various milestone payments;
- our obligation to pay UTSW royalties based on net sales; and
- our obligation to pay UTSW fees associated with the prosecution, maintenance, or filing of the patents and patent applications we have licensed.

If we fail to comply with any of our obligations under the license agreements, or we are subject to a bankruptcy or dissolution, UTSW may have the right to terminate their respective license agreements, in which event we would not be able to market any product candidates covered by the licenses.

We do not currently own any patents, and we are heavily reliant upon licenses from UTSW to certain patent rights that are important or necessary to the development of our technology and product candidates. As a result, we may be limited in our ability to prevent competitors from developing and commercializing competitive products.

We do not control the prosecution, maintenance, or filing of the patents and patent applications that are licensed to us under the license agreements. Thus, these patents and patent applications were not drafted by us or our attorneys, and we do not directly control the prosecution of these patents and patent applications. We cannot be certain that drafting or prosecution of the patents and patent applications licensed to us has been conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents. UTSW directly controls the preparation, filing and prosecution of patent applications, and is responsible for maintaining the patents, covering technology that we license.

If we fail to comply with the obligations under our license agreement, including as a result of COVID-19 impacting our operations or due to lack of funds, or if we use the licensed intellectual property in an unauthorized manner, we may be required to pay damages and our licensors may have the right to terminate the license. If our license agreement is terminated, we may not be able to develop, manufacture, market or sell the product candidates covered by our agreement. Such an occurrence could materially adversely affect the value of the product candidates being developed under any such agreement.

Disputes may arise regarding intellectual property subject to, and any of our rights and obligations under, any license or other strategic agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe, misappropriate or violate the intellectual property of the licensor that is not subject to the license agreement;
- our diligence obligations under the license agreement and what activities satisfy those diligence obligations;
- the sublicensing of patent and other rights to third parties under any such agreement or collaborative relationships;
- the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners; and
- the priority of invention of patented technology.

In addition, the agreements under which we license intellectual property or technology to or from third parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations and prospects. Moreover, if disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates.

Our business also would suffer if any current or future licensors fail to abide by the terms of the license, if the licensed patents or other rights are found to be invalid or unenforceable, or if we are unable to enter into necessary licenses on acceptable terms. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing, misappropriating or otherwise violating the licensor's rights.

In addition, if we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may have to seek alternative options, such as developing new product candidates with design-around technologies, which may require more time and investment, or abandon development of the relevant research programs or product candidates and our business, financial condition, results of operations and prospects could suffer.

We have been granted licenses of use to patent applications. There can be no assurance that any of the patent applications that we have licenses to will result in issued patents. As a result, our ability to protect our proprietary technology in the marketplace may be limited.

We have been granted licenses of use to patent applications in many countries worldwide. These applications cover a range of treatment methods. Unless and until the pending patent applications are issued, their protective scope is impossible to determine. It is also impossible to predict whether or how many of the patent applications will result in issued patents. Even if pending applications are issued, they may be issued with coverage significantly narrower than what is currently sought.

Our proprietary position for our product candidates currently depends in part upon licenses to patents protecting methods of use, which may not prevent a competitor or other third party from using the same product candidate for another use.

Composition of matter patent claims on the active pharmaceutical ingredient, or API, in pharmaceutical drug products are generally considered to be the favored form of intellectual property protection for pharmaceutical products, as such patents generally provide protection without regard to any particular method of use, manufacture or formulation of the API used. Method of use patent claims protect the use of a product for the specified method. These types of patent claims do not prevent a competitor or other third party from making and marketing an identical API for an indication that is outside the scope of the method claims. Moreover, even if competitors or other third parties do not actively promote their product for our targeted indications or uses for which we may obtain patents, physicians may recommend that patients use these products off-label, or patients may do so themselves. Although off-label use may infringe or contribute to the infringement of method of use patents, the practice is common and such infringement is difficult to prevent or prosecute.

Our patents may be challenged in courts or in patent offices which could result in the invalidation, narrowing or unenforceability of our patents and our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

There is no assurance that all the potentially relevant prior art relating to our patents and patent applications has been found, which can invalidate a patent or prevent a patent from issuing from a pending patent application. Even if patents do successfully issue and even if such patents further cover THIO or any future product candidate, third parties may challenge their validity, enforceability or scope, which may result in such patents being narrowed, invalidated, or held unenforceable. Any successful challenge to any patents owned by or licensed to us could deprive us of rights necessary for the successful commercialization of any product candidates that we may develop. Further, if we encounter delays in regulatory approvals, the period during which we could market a product candidate under patent protection could be reduced.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. In addition, the laws of foreign countries may not protect our rights to the same extent as the laws of the United States. For example, European patent law restricts the patentability of methods of treatment of the human body more than U.S. law does. However, in certain instances, the laws of the United States are more restrictive than those of foreign countries. For example, a recent series of Supreme Court Cases has narrowed the types of subject matter considered eligible for patenting. Accordingly, certain diagnostic methods are considered ineligible for patenting because they are directed to a "law of nature." Further, publications of discoveries in scientific literature often lag 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 know with certainty whether we were the first to make the inventions claimed in our owned or licensed patents or pending patent applications, or that we were the first to file for patent protection of such inventions. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued which protect our technology or products, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and licensed patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in patent claims being narrowed, invalidated, held unenforceable, in whole or in part, or reduced in term. Such a result could limit our ability to stop others from using or commercializing similar or identical technology and products. Moreover, patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after it is filed. While various extensions may be available, the life of a patent is limited. Without patent protection for our current or future product candidates, we may be open to competition from generic versions of such products. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

We may become subject to third parties' claims alleging infringement of their patents and proprietary rights, or we may need to become involved in lawsuits to protect or enforce our patents, which could be costly and/or time consuming, delay or prevent the development and commercialization of our product candidates or put our patents and other proprietary rights at risk.

Our commercial success depends, in part, upon our ability to develop, manufacture, market and sell our product candidates without alleged or actual infringement, misappropriation or other violation of the patents and proprietary rights of third parties. Litigation relating to infringement or misappropriation of patent and other intellectual property rights in the pharmaceutical and biotechnology industries is common, including patent infringement lawsuits, *inter partes* review, interferences, oppositions and reexamination proceedings before the U.S. Patent and Trademark Office, or USPTO, and corresponding foreign patent offices. The various markets in which we plan to operate are subject to frequent and extensive litigation regarding patents and other intellectual property rights. In addition, many companies in intellectual property-dependent industries, including the biotechnology and pharmaceutical industries, have employed intellectual property litigation as a means to gain an advantage over their competitors.

Numerous U.S., EU and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing product candidates. Some claimants may have substantially greater resources than we do and may be able to sustain the costs of complex intellectual property litigation to a greater degree and for longer periods of time than we could. In addition, patent holding companies that focus solely on extracting royalties and settlements by enforcing patent rights may target us. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may be subject to claims of infringement of the intellectual property rights of third parties.

We may be subject to third-party claims including infringement, interference, or derivation proceedings before the USPTO or similar adversarial proceedings or litigation in other jurisdictions. Even if we believe third party infringement claims are without merit, a court of competent jurisdiction could hold that the third-party patents are valid, enforceable and infringed, and the holders of any such patents may be able to block our ability to commercialize the applicable product candidate unless we obtained a license under the applicable patents, or until such patents expire or are finally determined to be invalid or unenforceable.

Proceedings challenging our patents or those that we license may also result in our patent claims being invalidated or narrowed in scope. Similarly, if our patents or patent applications are challenged during interference or derivation proceedings, a court may hold that a third-party is entitled to certain patent ownership rights instead of us. Further, if any third-party patents were held by a court of competent jurisdiction to cover aspects of our compositions, formulations, methods of manufacture, or methods of treatment, prevention or use, the holders of any such patents may be able to block our ability to develop and commercialize the applicable product candidate unless we obtained a license or until such patent expires or is finally determined to be invalid or unenforceable.

Defending such claims would cause us to incur substantial expenses and, if unsuccessful, could cause us to pay substantial damages if we are found to be infringing a third party's patent rights. If we are found to have infringed such rights willfully, the damages may be enhanced and may include attorneys' fees. Further, if a patent infringement suit is brought against us or our third-party service providers, our development, manufacturing or sales activities relating to the product or product candidate that is the subject of the suit may be delayed or terminated.

As a result of patent infringement claims, or in order to avoid potential infringement claims, we may choose to seek, or be required to seek, a license from the third party, which may require us to pay license fees or royalties or both. These licenses may not be available on acceptable terms, or at all. Even if a license can be obtained on acceptable terms, the rights may be nonexclusive, which could give our competitors access to the same intellectual property rights. If we are unable to enter into a license on acceptable terms, we could be prevented from commercializing one or more of our product candidates, forced to modify such product candidates, or to cease some aspect of our business operations, which could harm our business significantly. Modifying our product candidates to design around third-party intellectual property rights may result in significant cost or delay to us and could prove to be technically infeasible.

Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business. In addition, if the breadth or strength of protection provided the patents and patent applications we own or in-license is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

If we were to initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that our patent is invalid or unenforceable. In patent litigation in the United States and in Europe, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, lack of eligibility, lack of novelty, obviousness or non-enablement. Third parties might allege unenforceability of our patents because someone connected with prosecution of the patent withheld relevant information, or made a misleading statement, during prosecution.

The outcome of proceedings involving assertions of invalidity and unenforceability during patent litigation is unpredictable. With respect to the validity of 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. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product candidates. Furthermore, our patents and other intellectual property rights also will not protect our technology if competitors design around our protected technology without infringing on our patents or other intellectual property rights.

Additionally, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors view these announcements in a negative light, the price of our common stock could be adversely affected.

Finally, even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors view these announcements in a negative light, the price of our common stock could be adversely affected. Such litigation or proceedings could substantially increase our operating losses and reduce our resources available for development activities.

We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have an adverse effect on our ability to compete in the marketplace.

We may not identify relevant third-party patents or may incorrectly interpret the relevance, scope or expiration of a third-party patent, which might adversely affect our ability to develop, manufacture and market our product candidates.

We cannot guarantee that any of our or our licensors' patent searches or analyses, including but not limited to 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, Europe and elsewhere that is relevant to or necessary for the commercialization of our product candidates in any jurisdiction. For example, in the United States, applications filed before November 29, 2000 and certain applications filed after that date that will not be filed outside the United States remain confidential until patents issue. Patent applications in the United States, EU and elsewhere are published approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Therefore, patent applications covering our future product candidates, or their manufacture or use may currently be unpublished. Additionally, pending patent applications that have been published can, subject to certain limitations, be later

amended in a manner that could cover our product candidates or the use of our product candidates. 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, which may negatively impact our ability to market our product candidates. We may incorrectly determine that our product candidates 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, the EU or elsewhere that we consider relevant may be incorrect, which may negatively impact our ability to develop and market our product candidates. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our product candidates.

From time to time we may identify patents or applications in the same general area as our products and product candidates. We may determine these third-party patents are irrelevant to our business based on various factors including our interpretation of the scope of the patent claims and our interpretation of when the patent expires. If the patents are asserted against us, however, a court may disagree with our determinations. Further, while we may determine that the scope of claims that will issue from a patent application does not present a risk, it is difficult to accurately predict the scope of claims that will issue from a patent application, our determination may be incorrect, and the issuing patent may be asserted against us. We cannot guarantee that we will be able to successfully settle or otherwise resolve such infringement claims. If we fail in any such dispute, in addition to being forced to pay monetary damages, we may be temporarily or permanently prohibited from commercializing our product candidates. We might, if possible, also be forced to redesign our product candidates so that we no longer infringe on the third-party intellectual property rights. Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business.

Changes in patent laws or patent jurisprudence could diminish the value of patents in general, thereby impairing our ability to protect our product candidates.

As is the case with other biopharmaceutical and pharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical and pharmaceutical industries involve both technological complexity and legal complexity. Therefore, obtaining and enforcing biopharmaceutical and pharmaceutical patents is costly, time-consuming and inherently uncertain. In addition, the America Invents Act (AIA) which was passed in September 2011, resulted in significant changes to the U.S. patent system.

An important change introduced by the AIA is that, as of March 16, 2013, the United States transitioned to a "first-to-file" system for deciding which party should be granted a patent when two or more patent applications are filed by different parties claiming the same invention. A third party that files a patent application in the USPTO after that date but before us could therefore be awarded a patent covering an invention of ours even if we made the invention before it was made by the third party. This will require us to be cognizant going forward of the time from invention to filing of a patent application, but circumstances could prevent us from promptly filing patent applications on our inventions.

Among some of the other changes introduced by the AIA are changes that limit where a patentee may file a patent infringement suit and provide opportunities for third parties to challenge any issued patent with the USPTO. This applies to all of our U.S. patents, even those issued before March 16, 2013. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in U.S. 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 be insufficient to invalidate the claim if first presented in a district court action.

Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. It is not clear what, if any, impact the AIA will have on the operation of our business. However, the AIA and its implementation could increase the uncertainties and costs surrounding the prosecution of our or our licensors' patent applications and the enforcement or defense of our or our licensors' issued patents.

Additionally, the U.S. Supreme Court has ruled on several patent cases in recent years either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. Similarly, the complexity and uncertainty of European patent laws has also increased in recent years. In addition, the European patent system is relatively stringent in the type of amendments that are allowed during prosecution. Complying with these laws and regulations could limit our ability to obtain new patents in the future that may be important for our business.

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

Periodic maintenance and annuity fees on any issued patent are due to be paid to the USPTO and European and other patent agencies over the lifetime of a patent. In addition, the USPTO and European and other patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent failure to make payment of such fees or to comply with such provisions 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 such noncompliance will result in the abandonment or lapse of the patent or patent application, and the 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 failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents within prescribed time limits. If we or our licensors fail to maintain the patents and patent applications covering our product candidates or if we or our licensors otherwise allow our patents or patent applications to be abandoned or lapse, our competitors might be able to enter the market, which would hurt our competitive position and could impair our ability to successfully commercialize our product candidates in any indication for which they are approved.

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

Filing, prosecuting and defending patents covering our product candidates in all countries throughout the world would be prohibitively expensive. Competitors may use our and our licensors' 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 and our licensors have patent protection, but enforcement is not as strong as that in the United States or the EU. These products may compete with our product candidates, and our and our licensors' patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

In addition, we may decide to abandon national and regional patent applications before grant. The grant proceeding of each national or regional patent is an independent proceeding which may lead to situations in which applications might in some jurisdictions be refused by the relevant patent offices, while granted by others. For example, unlike other countries, China has a heightened requirement for patentability, and specifically requires a detailed description of medical uses of a claimed drug. Furthermore, generic drug manufacturers or other competitors may challenge the scope, validity or enforceability of our or our licensors' patents, requiring us or our licensors to engage in complex, lengthy and costly litigation or other proceedings. Generic drug manufacturers may develop, seek approval for and launch generic versions of our products. It is also quite common that depending on the country, the scope of patent protection may vary for the same product candidate or technology.

The laws of some jurisdictions do not protect intellectual property rights to the same extent as the laws or rules and regulations in the United States and the EU, and many companies have encountered significant difficulties in protecting and defending such rights in such jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, which could make it difficult for us to stop the infringement of our patents or

marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in other jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us.

We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license. Furthermore, while we intend to protect our intellectual property rights in our expected significant markets, we cannot ensure that we will be able to initiate or maintain similar efforts in all jurisdictions in which we may wish to market our product candidates. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate, which may have an adverse effect on our ability to successfully commercialize our product candidates in all of our expected significant foreign markets. If we or our licensors encounter difficulties in protecting, or are otherwise precluded from effectively protecting, the intellectual property rights important for our business in such jurisdictions, the value of these rights may be diminished, and we may face additional competition from others in those jurisdictions.

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

If we do not obtain patent term extension in the United States under the Hatch-Waxman Act and in foreign countries having similar legislation, thereby potentially extending the term of marketing exclusivity for our product candidates, our business may be materially harmed.

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 life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent life has expired for a product, we may be open to competition from competitive medications, including generic medications. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed 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 conditions of FDA marketing approval of our product candidates, we may be able to extend the term of a patent covering each product candidate under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments and similar legislation in the EU. The Hatch-Waxman Amendments permit a patent term extension of up to five years for a non-expired patent which claims a human drug product, a method of using the product, or a method of manufacturing the product, as compensation for effective patent term lost during product development and the FDA regulatory review process. Moreover, only one patent may be extended covering the drug product and the total patent term including the extension cannot exceed 14 years following regulatory approval. However, we may not receive an extension if we fail to apply within applicable deadlines, fail to apply prior to expiration of relevant patents or otherwise fail to satisfy applicable requirements. Moreover, the length of the extension could be less than we request. If we are unable to obtain patent term extension or the term of any such extension is less than we request, the period during which we can enforce our patent rights for that product will be shortened and our competitors may obtain approval to market competing products sooner. As a result, our revenue from applicable products could be reduced, possibly materially.

Further, under certain circumstances, patent terms covering our products or product candidates may be extended for time spent during the pendency of the patent application in the USPTO (referred to as Patent Term Adjustment, or PTA). The laws and regulations underlying how the USPTO calculates the PTA is subject to change and any such PTA granted by the USPTO could be challenged by a third-party. If we do not prevail

under such a challenge, the PTA may be reduced or eliminated, resulting in a shorter patent term, which may negatively impact our ability to exclude competitors. Because PTA added to the term of patents covering pharmaceutical products has particular value, our business may be adversely affected if the PTA is successfully challenged by a third party and our ability to exclude competitors is reduced or eliminated.

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

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

- others may be able to make products that are similar to THIO or our future product candidates but that are not covered by the claims of the patents that we own or license from others;
- others may independently develop similar or alternative technologies or otherwise circumvent any of our technologies without infringing our intellectual property rights;
- we or any of our collaborators might not have been the first to conceive and reduce to practice the inventions covered by the patents or patent applications that we own, license or will own or license;
- we or any of our collaborators might not have been the first to file patent applications covering certain of the patents or patent applications that we or they own or have obtained a license, or will own or will have obtained a license;
- it is possible that our pending patent applications will not lead to issued patents;
- issued patents that we own may not provide us with any competitive advantage, or 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, or in countries where research and development safe harbor laws exist, and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- ownership of our patents or patent applications may be challenged by third parties; and
- the patents of third parties or pending or future applications of third parties, if issued, may have an adverse effect on our business.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that our trade secrets will be misappropriated or disclosed, and confidentiality agreements with employees and third parties may not adequately prevent disclosure of trade secrets and protect other proprietary information.

We consider proprietary trade secrets or confidential know-how and unpatented know-how to be important to our business. We may rely on trade secrets or confidential know-how to protect our technology, especially where patent protection is believed by us to be of limited value. Because we expect to rely on third parties to manufacture THIO and any future product candidates, and we expect to collaborate with third parties on the development of THIO and any future product candidates, we must, at times, share trade secrets with them. We also conduct joint research and development programs that may require us to share trade secrets under the terms of our research and development partnerships or similar agreements. However, trade secrets or confidential know-how can be difficult to maintain as confidential.

To protect this type of information against disclosure or appropriation by competitors, our policy is to require our employees, consultants, contractors and advisors to enter into confidentiality agreements and, if applicable, material transfer agreements, consulting agreements or other similar agreements with us prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, including our trade secrets. However, current or former employees, consultants, contractors and advisers may unintentionally or willfully disclose our confidential information to competitors, and confidentiality agreements may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. The need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor’s discovery of our trade secrets or other unauthorized use or disclosure would impair our competitive position and may have an

adverse effect on our business and results of operations. Enforcing a claim that a third party obtained illegally and is using trade secrets or confidential know-how is expensive, time consuming and unpredictable. The enforceability of confidentiality agreements may vary from jurisdiction to jurisdiction.

In addition, these agreements typically restrict the ability of our advisors, employees, third-party contractors and consultants to publish data potentially relating to our trade secrets, although our agreements may contain certain limited publication rights. Despite our efforts to protect our trade secrets, our competitors may discover our trade secrets, either through breach of our agreements with third parties, independent development or publication of information by any of our third-party collaborators. A competitor's discovery of our trade secrets would impair our competitive position and have an adverse impact on our business.

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 expect to rely on trademarks as one means to distinguish any of our product candidates that are approved for marketing from the products of our competitors. We have not yet selected trademarks for our product candidates and have not yet begun the process of applying to register trademarks for any other of our product candidates. Once we select trademarks and apply to register them, our trademark applications may not be approved. Third parties may oppose our trademark applications, or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. Our competitors may infringe our trademarks and we may not have adequate resources to enforce our trademarks.

In addition, any proprietary name we propose to use with our clinical-stage product candidates or any other 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. The FDA typically conducts a review of proposed product names, including an evaluation of the potential for confusion with other product names. If the FDA objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable proprietary product name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. The EMA may also object to our proposed proprietary product name that infringes the existing rights of third parties.

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. 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. Our efforts to enforce or protect our proprietary rights related to trademarks, trade secrets, domain names, copyrights or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely affect our business, financial condition, results of operations and growth prospects.

We may need to license certain intellectual property from third parties, and such licenses may not be available or may not be available on commercially reasonable terms.

A third party may hold intellectual property, including patent rights that are important or necessary to the development or commercialization of THIO or our future product candidates. It may be necessary for us to use the patented or proprietary technology of third parties to commercialize THIO or our product candidates, in which case we would be required to obtain a license from these third parties. Such a license may not be available on commercially reasonable terms, or at all, which could materially harm our business. At this time, we are unaware of any intellectual property that interferes with ours or is complementary and needed to commercialize THIO.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of their former employers or other third parties.

We employ individuals who were previously employed at other biotechnology or pharmaceutical companies. Although we seek to protect our ownership of intellectual property rights by ensuring that our agreements with

our employees, collaborators and other third parties with whom we do business include provisions requiring such parties to assign rights in inventions to us, we may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed confidential information of our employees' former employers or other third parties. We may also be subject to claims that former employers or other third parties have an ownership interest in our patents. Litigation may be necessary to defend against these claims. There is no guarantee of success in defending these claims, and if we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership or right to use. Even if we are successful, litigation could result in substantial cost and be a distraction to our management and other employees.

Our proprietary information may be lost, or we may suffer security breaches.

In the ordinary course of our business, we collect and store sensitive data, including intellectual property, clinical trial data, proprietary business information, personal data and personally identifiable information of our clinical trial subjects and employees, in our data centers and on our networks. The secure processing, maintenance and transmission of this information is critical to our operations. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Although, to our knowledge, we have not experienced any such material security breach to date, any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, significant regulatory penalties, disruption of our operations, damage to our reputation and cause a loss of confidence in us and our ability to conduct clinical trials, which could adversely affect our reputation and delay our clinical development of our product candidates.

Risks Related to Our Employees, Managing Our Growth and Our Operations

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

We are highly dependent on the development, regulatory, commercialization and business development expertise of Vlad Vitoc and Mihail Obrocea, as well as the other principal members of our management, scientific and clinical teams. Although we have employment agreements, offer letters or consulting agreements with our executive officers, these agreements do not prevent them from terminating their services at any time.

If we lose one or more of our executive officers or key employees, our ability to implement our business strategy successfully could be seriously harmed. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop product candidates, gain regulatory approval, and commercialize new products. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these additional key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be engaged by entities other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain highly qualified personnel, our ability to develop and commercialize product candidates will be limited.

We expect to expand our development, regulatory, and sales and marketing capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

We expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of development, regulatory affairs and sales and marketing. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities or acquire new facilities and continue to recruit and train additional qualified personnel.

Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

We may engage in acquisitions that could disrupt our business, cause dilution to our stockholders or reduce our financial resources.

In the future, we may enter into transactions to acquire other businesses, products or technologies. If we do identify suitable candidates, we may not be able to make such acquisitions on favorable terms, or at all. Any acquisitions we make may not strengthen our competitive position, and these transactions may be viewed negatively by customers or investors. We may decide to incur debt in connection with an acquisition or issue our common stock or other equity securities to the stockholders of the acquired company, which would reduce the percentage ownership of our existing stockholders. We could incur losses resulting from undiscovered liabilities of the acquired business that are not covered by the indemnification we may obtain from the seller. In addition, we may not be able to successfully integrate the acquired personnel, technologies and operations into our existing business in an effective, timely and non-disruptive manner. Acquisitions may also divert management attention from day-to-day responsibilities, increase our expenses and reduce our cash available for operations and other uses. We cannot predict the number, timing or size of future acquisitions or the effect that any such transactions might have on our operating results.

Our business and operations would suffer in the event of system failures.

Our computer systems, as well as those of our CROs and other contractors and consultants, are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs. For example, the loss of preclinical or clinical trial data from completed, ongoing or planned trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of or damage to our data or applications, or inappropriate disclosure of personal, confidential or proprietary information, we could incur liability and the further development of THIO or any other product candidate could be delayed.

Risks Relating to Our Initial Public Offering and Ownership of Our Common Stock

There is no existing market for our common stock and an active, liquid trading market for our common stock may not develop.

Prior to this offering, there has been a limited market for our common stock. Although we have applied to list our common stock on the Nasdaq under the symbol “MAIA,” we cannot predict the extent to which investor interest in our Company will lead to the development of an active trading market or how liquid that market may become. If an active trading market does not develop, you may have difficulty selling any of our shares that you purchase. The initial public offering price of our common stock will be determined by negotiation between us and the underwriters, and may not be indicative of prices that will prevail after the completion of this offering. The market price of our common stock may decline below the initial public offering price, and you may not be able to resell your shares at, or above, the initial public offering price.

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

Securities markets worldwide have experienced in the past, and are likely to experience in the future, significant price and volume fluctuations. This market volatility, as well as general economic, market, or political conditions could reduce the market price of our common stock regardless of our results of operations. The trading price of our common stock is likely to be highly volatile and could be subject to wide price fluctuations in response to various factors including, among other things, the risk factors described herein and other factors beyond our control. Factors affecting the trading price of our common stock could include, but are not limited to:

- market conditions in the broader stock market;
- actual or anticipated variations in our quarterly results of operations;
- developments in our industry in general;
- results from our ongoing clinical trials and future clinical trials with our current and future product candidates or of our competitors;
- adverse results or delays in clinical trials;
- failure to commercialize our product candidates;
- unanticipated serious safety concerns related to the use of our product candidates;
- changes in our projected operating results that we provide to the public, our failure to meet these projections or changes in recommendations by securities analysts that elect to follow our common stock;
- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority’s review of such filings, including without limitation the FDA’s issuance of a “refusal to file” letter or a request for additional information;
- regulatory or legal developments in the United States and other countries;
- the level of expenses related to future product candidates or clinical development programs;
- our failure to achieve product development goals in the timeframe we announce;
- issuance of new, negative or changed securities analysts' reports or recommendations or estimates;
- sales, or anticipated sales, of our stock, including sales by our officers, directors and significant stockholders;
- additions or departures of key personnel;
- regulatory or political developments;
- the public's response to press releases or other public announcements by us or third parties, including our filings with the SEC;
- announcements, media reports or other public forum comments related to litigation, claims or reputational charges against us;
- guidance, if any, that we provide to the public, any changes in this guidance, or our failure to meet this guidance;
- the development and sustainability of an active trading market for our common stock;
- investor perceptions of the investment opportunity associated with our common stock relative to other investment alternatives;
- other events or factors, including those resulting from system failures and disruptions, earthquakes, hurricanes, war, acts of terrorism, global outbreaks or pandemic, other natural disasters or responses to these events;
- changes in accounting principles;
- litigation and governmental investigations; and
- changing economic conditions.

These and other factors may cause the market price and demand for shares of our common stock to fluctuate substantially, which may limit or prevent investors from readily selling their shares of common stock and may otherwise negatively affect the liquidity of our common stock.

We could be subject to securities class action litigation.

In the past, when the market price of a stock has been volatile, holders of that stock sometimes have instituted securities class action litigation against the company that issued the stock following a decline in the market price of their securities. This risk is especially relevant for us because biotechnology companies have experienced significant

share price volatility in recent years. Securities litigation against us, regardless of the merits or outcome, could result in substantial costs and divert the time and attention of our management from our business, which could have a material adverse effect on our business, financial condition, and results of operations.

Future sales of our common stock, or the perception in the public markets that these sales may occur, could cause the market price for our common stock to decline.

All shares of common stock sold in this offering will be freely transferable without restriction or further registration under the Securities Act. At the time of this offering, we also will have registered shares of common stock reserved for issuance under our equity incentive plans of which restricted stock units representing shares of common stock are outstanding, which shares may be issued upon issuance and once vested, subject to any applicable lock-up restrictions then in effect. We cannot predict the effect, if any, that market sales of shares of our common stock or the availability of shares of our common stock for sale will have on the market price of our common stock prevailing from time to time. Sales of substantial amounts of shares of our common stock in the public market, or the perception that those sales will occur, could cause the market price of our common stock to decline. Of the shares of common stock outstanding, will be restricted securities within the meaning of Rule 144 under the Securities Act and subject to certain restrictions on resale following the consummation of this offering. Restricted securities may be sold in the public market only if they are registered under the Securities Act, or are sold pursuant to an exemption from registration such as Rule 144 or Rule 701, as described in "Shares Eligible for Future Sale."

We, each of our officers, directors, and certain of our stockholders have agreed, subject to certain exceptions, not to sell, offer, agree to sell, contract to sell, hypothecate, pledge, grant any option to purchase, make any short sale of, or otherwise dispose of or hedge, directly or indirectly, any shares of our capital stock or any securities convertible into or exercisable or exchangeable for shares of capital stock, for a period of 180 days after the date of this prospectus, without the prior written consent of the representative. See "Underwriting" for additional information. Following the expiration of the applicable lock-up period, all of the issued and outstanding shares of our common stock will be eligible for future sale, subject to the applicable volume, manner of sale, holding period, and other limitations of Rule 144. See "Shares Eligible for Future Sale" for a discussion of the shares of common stock that may be sold into the public market in the future.

If securities or industry analysts publish unfavorable research about our business, or if our competitors' stock performance decline, the price of our common stock and our trading volume could decline.

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts may publish about us or our business. We do not have any control over these analysts. Securities and industry analysts do not currently publish research on our Company. Once securities or industry analysts initiate coverage, if one or more of the analysts who cover us downgrade our common stock or publish unfavorable research about our business, the price of our common stock likely would decline. Additionally, if one of our competitor's stock performance declines, the price of our common stock and our trading volume could decline as well. If one or more of these analysts cease coverage of our Company or fail to publish reports on us regularly, or if one of our competitor's stock performance declines, demand for our common stock could decrease, which might cause the price of our common stock and trading volume to decline.

We do not intend to pay dividends for the foreseeable future, and our ability to pay dividends to our stockholders is restricted by applicable laws and regulations.

We may retain future earnings, if any, for future operations, expansion and debt repayment and have no current plans to pay any cash dividends for the foreseeable future. As a result of our current dividend policy, you may not receive any return on an investment in our common stock unless you sell our common stock for a price greater than that which you paid for it. Any future determination to declare and pay cash dividends will be at the discretion of our board of directors and will depend on, among other things, our financial condition, results of operations, cash requirements, contractual restrictions and such other factors as our board of directors deems relevant. Our ability to declare and pay dividends to our stockholders is subject to certain laws, regulations, and policies, including minimum capital requirements and, as a Delaware corporation, we are subject to certain restrictions on dividends under the Delaware General Corporation Law (the "DGCL"). Under the DGCL, our board of directors may not authorize payment of a dividend unless it is either paid out of our surplus, as calculated in accordance with the DGCL, or if we do not have a surplus, it is paid out of our net profits for the fiscal year in which the dividend is

declared and/or the preceding fiscal year. Our ability to pay dividends depends on our receipt of cash dividends from our operating subsidiaries, which may further restrict our ability to pay dividends as a result of the laws of their jurisdiction of organization or agreements of our subsidiaries, including agreements governing our indebtedness. For more information, see "Dividend Policy."

We will have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

We will have broad discretion in the application of the net proceeds from this offering and our shareholders will not have the opportunity as part of their investment decision to assess whether the net proceeds are being used appropriately. You may not agree with our decisions, and our use of the proceeds may not yield any return on your investment. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our failure to apply the net proceeds of this offering effectively could compromise our ability to pursue our growth strategy and we might not be able to yield a significant return, if any, on our investment of these net proceeds. See “Use of Proceeds” for a description of how we intend to use the proceeds of the offering.

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

The initial public offering price of our common stock will be substantially higher than the as adjusted net tangible book value per share of our common stock. Therefore, if you purchase our common stock in this offering, you will pay a price per share of our common stock that substantially exceeds the book value of our tangible assets after subtracting our liabilities. Based on an initial public offering price of $ per share, you will experience immediate dilution of $ per share, representing the difference between our net tangible book value per share, after giving effect to this offering, and the initial public offering price. Further, the issuance of any Ratchet Shares to the Crossover Investors, and the future exercise of any outstanding options and/or warrants to purchase shares of our common stock will cause you to experience additional dilution. See “Description of Capital Stock—Crossover Round” and “Dilution.”

Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect prior to the completion of this offering provide that we will indemnify our directors and officers, in each case, to the fullest extent permitted by Delaware law. Pursuant to our amended and restated bylaws and the DGCL, our directors will not be liable to the Company or any stockholders for damages for any breach of fiduciary duty, except (i) acts that breach his or her duty of loyalty to the Company or its stockholders; (ii) acts or omissions without good faith or involving intentional misconduct or knowing violation of the law; (iii) pursuant to Section 174 of the DGCL regarding director liability for unlawful payment of a dividend or unlawful stock purchase or redemption; or (iv) for any transaction from which the director derived an improper personal benefit. In addition, we intend to enter into indemnification agreements with each of our executive officers and directors that will be in effect upon the completion of this offering. The indemnification agreements will provide the executive officers and directors with contractual rights to indemnification, expense advancement and reimbursement, to the fullest extent permitted under the DGCL. The bylaws also require us, if so requested, to advance expenses that such director or officer incurred in defending or investigating a threatened or pending action, suit or proceeding, provided that such person will return any such advance if it is ultimately determined that such person is not entitled to indemnification by us. Any claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

We may, in the future, issue additional capital stock, which would reduce investors’ percent of ownership and may dilute our share value.

We have the right to raise additional capital or incur borrowings from third parties to finance our business. We may also implement public or private mergers, business combinations, business acquisitions and similar transactions pursuant to which it would issue substantial additional capital stock to outside parties, causing substantial dilution in the ownership of the Company by our existing stockholders. Our Board of Directors has the authority, without the consent of any of the stockholders, to cause us to issue more shares of common stock and/or preferred stock at such price and on such terms and conditions as are determined by the Board of Directors in its sole discretion. The

issuance of additional shares of capital stock by us will dilute your ownership percentage in the Company and could impair our ability to raise capital in the future through the sale of equity securities.

Certain stockholders who are also officers and directors of the Company may have significant control over our management.

Our directors and executive officers own as of December 31, 2021, an aggregate of shares of our common stock, which currently constitutes % of our issued and outstanding common stock and, upon closing of this offering, will own an aggregate of shares of our common stock, which will constitute % of our issued and outstanding common stock. As a result, our directors and executive officers may have a significant influence on our affairs and management, as well as on all matters requiring stockholder approval, including electing and removing members of our Board of Directors, causing us to engage in transactions with affiliated entities, causing or restricting our sale or merger, and certain other matters. Such concentration of ownership and control could have the effect of delaying, deferring or preventing a change in control of us even when such a change of control would be in the best interests of our stockholders.

Anti-takeover protections in our amended and restated certificate of incorporation and our amended and restated bylaws, each of which will be in effect prior to the completion of this offering, or our contractual obligations may discourage or prevent a takeover of our Company, even if an acquisition would be beneficial to our stockholders.

Provisions contained in our amended and restated certificate of incorporation and our amended and restated bylaws, each as amended to be in effect upon completion of this offering, as well as provisions of the DGCL, could delay or make it more difficult to remove incumbent directors or could impede a merger, takeover or other business combination involving us or the replacement of our management, or discourage a potential investor from making a tender offer for our common stock, which, under certain circumstances, could reduce the market value of our common stock, even if it would benefit our stockholders. Among other things, these provisions:

- do not permit cumulative voting in the election of directors, which would otherwise allow less than a majority of stockholders to elect director candidates;
- delegate the sole power of a majority of the board of directors to fix the number of directors;
- provide the power to our board of directors to fill any vacancy on our board of directors, whether such vacancy occurs as a result of an increase in the number of directors or otherwise;
- generally limit stockholders ability to call special meetings of stockholders and generally prohibit stockholder action to be taken by written consent; and
- establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted on by stockholders at stockholder meetings.

Our amended and restated bylaws will designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees, agents or other stockholders.

Our amended and restated bylaws will provide that, unless we consent in writing to an alternative forum, the Court of Chancery of the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for any (i) derivative action or proceeding brought on our behalf, (ii) action asserting a claim of breach of a fiduciary duty or other wrongdoing by any current or former director, officer, employee, agent or stockholder to us or our stockholders, (iii) any action or proceeding asserting a claim against us or any current or former director, officer or other employee of the company, arising out of or pursuant to arising under any provision of the DGCL, our amended and restated certificate of incorporation, or our amended and restated bylaws or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware, or (iv) action asserting a claim governed by the internal affairs doctrine of the law of the State of Delaware, except for, as to each of (i) through (iv) above, any action as to which the Court of Chancery of the State of Delaware determines that there is an indispensable party not subject to the personal jurisdiction of the Court of Chancery of the State of Delaware (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery of the State of Delaware within ten (10) days following such determination), in which case the United States District Court for the District of Delaware or other state courts of the State of Delaware, as applicable, shall, to the fullest extent permitted by law, be the sole and exclusive forum for any such claims. However, the exclusive forum provisions shall not apply to suits brought to

enforce a duty or liability created by the Securities Act, the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction, for which the federal district courts of the District of Delaware shall be the sole and exclusive forum unless the Company consents in writing to the selection of an alternative forum. Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. To the fullest extent permitted by law, any person or entity purchasing or otherwise acquiring or holding any interest in any shares of our capital stock shall be deemed to have notice of and consented to the forum provision in our amended and restated bylaws. This choice of forum provision may limit a stockholder's ability to bring a claim in a different judicial forum, including one that it may find favorable or convenient for a specified class of disputes with us or our directors, officers, other stockholders, or employees, which may discourage such lawsuits, make them more difficult or expensive to pursue, and result in outcomes that are less favorable to such stockholders than outcomes that may have been attainable in other jurisdictions. By agreeing to this provision, however, stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder. 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. If a court were to find the choice of forum provisions in our 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 have a material adverse effect on our business, financial condition and results of operations.

We are considered a "smaller reporting company" and are exempt from certain disclosure requirements, which could make our stock less attractive to potential investors.

Rule 12b-2 of the Exchange Act defines a "smaller reporting company" as an issuer that is not an investment company, an asset-backed issuer, or a majority-owned subsidiary of a parent that is not a smaller reporting company and that:

- Had a public float of less than $250 million as of the last business day of its most recently completed fiscal quarter, computed by multiplying the aggregate number of worldwide number of shares of its voting and non-voting common equity held by non-affiliates by the price at which the common equity was last sold, or the average of the bid and asked prices of common equity, in the principal market for the common equity; or
- In the case of an initial registration statement under the Securities Act or the Exchange Act for shares of its common equity, had a public float of less than $250 million as of a date within 30 days of the date of the filing of the registration statement, computed by multiplying the aggregate worldwide number of such shares held by non-affiliates before the registration plus, in the case of a Securities Act registration statement, the number of such shares included in the registration statement by the estimated initial public offering price of the shares; or
- In the case of an issuer who had annual revenue of less than $100 million during the most recently completed fiscal year for which audit financial statements are available, had a public float as calculated under paragraph (1) or (2) of this definition that was either zero or less than $700 million.

As a "smaller reporting company" we are not required and may not include a Compensation Discussion and Analysis section in our proxy statements; we provide only 3 years of business development information; provide fewer years of selected data; and have other "scaled" disclosure requirements that are less comprehensive than issuers that are not "smaller reporting companies" which could make our stock less attractive to potential investors, which could make it more difficult for you to sell your shares.

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

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act, or JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including exemption from compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation and exemptions from the requirements

of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the closing of this offering, (b) in which we have total annual gross revenue of at least $1.07 billion or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock held by non-affiliates exceeds $700 million as of the end of our prior second fiscal quarter, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

In addition, under the JOBS Act, emerging growth companies can 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.

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

General Risk Factors

Changes in accounting standards and subjective assumptions, estimates and judgments by management related to complex accounting matters may materially impact reporting of our financial condition and results of operations.

Accounting principles generally accepted in the United States and related accounting pronouncements, implementation guidelines, and interpretations we apply to a wide range of matters that are relevant to our business, such as accounting for long-lived asset impairment and share-based compensation, are complex and involve subjective assumptions, estimates and judgments by our management. Changes in these rules or their interpretation or changes in underlying assumptions, estimates or judgments by our management could significantly change or add significant volatility to our reported or expected financial performance.

A potential failure to maintain effective internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act could have a material adverse effect on our business, financial condition, and results of operations.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with U.S. generally accepted accounting principles ("GAAP"). Under standards established by the Public Company Accounting Oversight Board ("PCAOB"), a deficiency in internal control over financial reporting exists when the design or operation of a control does not allow management or personnel, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis. The PCAOB defines a material weakness as a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented, or detected and corrected, on a timely basis.

We are required, pursuant to Section 404 of the Sarbanes-Oxley Act, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting for the first fiscal year beginning after the effective date of our IPO and in each year thereafter. Our auditors will also need to attest to the effectiveness of our internal control over financial reporting. If we are unable to assert that our internal control over financial reporting is effective, or when required in the future, if our independent registered public accounting firm is unable to express an unqualified opinion as to the effectiveness of our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could be adversely affected, and we could become subject to litigation or investigations by the stock exchange on which our common stock are listed, the SEC or other regulatory authorities, which could require additional financial and management resources and could have a material adverse effect on our business, financial condition, and results of operations.

The lack of public company experience of our management team could adversely impact our ability to comply with the reporting requirements of U.S. securities laws, which could have a materially adverse effect on our business.

Our officers have limited public company experience, which could impair our ability to comply with legal and regulatory requirements such as those imposed by Sarbanes-Oxley Act. Such responsibilities include complying with federal securities laws and making required disclosures on a timely basis. Any such deficiencies, weaknesses or lack of compliance could have a materially adverse effect on our ability to comply with the reporting requirements of the Exchange Act, which is necessary to maintain our public company status. If we were to fail to fulfill those obligations, our ability to continue as a U.S. public company would be in jeopardy in which event you could lose your entire investment in our Company.

We identified material weaknesses in our internal control over financial reporting, and we may identify additional material weaknesses in the future that may cause us to fail to meet our reporting obligations or result in material misstatements of our financial statements. If we fail to remediate any material weaknesses or if we otherwise fail to establish and maintain effective control over financial reporting, our ability to accurately and timely report our financial results could be adversely affected.

Upon becoming a public company, we will be required to comply with the SEC's rules implementing Sections 302 and 404 of the Sarbanes-Oxley Act, which will require management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of our controls over financial reporting. Although we will be required to disclose changes made in our internal controls and procedures on a quarterly basis, we will not be required to make our first annual assessment of our internal controls over financial reporting pursuant to Section 404 until the later of (i) the year following our first annual report required to be filed with the SEC or (ii) the date we are no longer an emerging growth company. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting, as well as a statement that our independent registered public accounting firm has issued an opinion on the effectiveness of our internal control over financial reporting, provided that our independent registered public accounting firm will not be required to attest to the effectiveness of our internal control over financial reporting until our first annual report required to be filed with the Securities and Exchange Commission, or SEC, following the later of the date we are deemed to be an "accelerated filer" or a "large accelerated filer," each as defined in the Exchange Act, or the date we are no longer an emerging growth company, as defined in the JOBS Act. We could be an emerging growth company for up to five years.

We identified deficiencies in our internal control that we consider to be material weaknesses in our internal control over financial reporting which existed as of December 31, 2021. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our consolidated financial statements will not be prevented or detected on a timely basis.

The Company did not maintain an effective control environment as there was an insufficient complement of personnel within the finance and accounting function with appropriate degree of knowledge, experience and training in the application of U.S. generally accepted accounting principles ("U.S. GAAP). In addition, the Company did not have an effective risk assessment process that defined clear financial reporting objectives and elevated risks, including fraud risks, at a sufficient level of detail to identify all relevant risks of material misstatement including the risks associated with the use of outsourced consultants in the preparation of schedules supporting balances within the consolidated financial statements. These factors contributed to the following additional material weaknesses.

We failed to design, implement and maintain effective controls regarding:

- the accounting for stock-based compensation and other stock-based financial instruments in accordance with U.S. GAAP. Specifically, we did not design and maintain controls to timely identify transactions requiring a valuation of our common stock and to review in sufficient detail, the valuation model assumptions used in determining the fair value of our common stock which is used as an input in accounting for stock-based compensation provided to employees and other stock-based financial instruments;

- the calculation of earnings per share in accordance with U.S. GAAP; and
- the reconciliation and review of significant account balances, authorization over cash disbursements, stock-based compensation calculations and related valuation models including inputs, period end financial reporting, risks associated with segregation of duties, and certain other entity level controls.

As we work towards remediating these material weaknesses, we will design and implement controls to properly identify transactions for which a valuation of our common stock is required and to review assumptions used in the valuation models to ensure our equity-based transactions are accounted for in accordance with U.S. generally accepted accounting principles. Additionally, we will design and implement controls to properly calculate basic and diluted weighted-average shares outstanding. Lastly, we will design, document, and consistently perform control activities in the identified areas which are currently lacking. To assist us in the remediation and performance of remediated controls we recently hired a Corporate Controller, and we will continue to utilize an accounting and financial reporting advisory firm with significant experience with publicly held companies to assist our management in evaluating transactions requiring the valuation of our common stock, in retaining and reviewing the work of valuation experts necessary to complete those valuations, and performing the calculation of basic and diluted weighted-average shares outstanding.

We may identify future material weaknesses in our internal controls over financial reporting or fail to meet the demands that will be placed upon us as a public company, including the requirements of the Sarbanes-Oxley, and we may be unable to accurately report our financial results, or report them within the timeframes required by law or stock exchange regulations. We cannot assure that our existing material weakness will be remediated or that additional material weaknesses will not exist or otherwise be discovered, any of which could adversely affect our reputation, financial condition and results of operations.

We will incur increased costs as a result of being a publicly traded company.

As a company with publicly traded securities, we will incur significant legal, accounting and other expenses not presently incurred as a private company. In addition, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act and the rules and regulations promulgated by the SEC and Nasdaq, will require us to adopt corporate governance practices applicable to U.S. public companies. These rules and regulations will increase our legal and financial compliance costs and may place a strain on our systems and resources. The Exchange Act requires that we file annual, quarterly and current reports with respect to our business and financial condition. The Sarbanes-Oxley Act requires that we maintain effective disclosure controls and procedures and internal controls over financial reporting. To maintain and improve the effectiveness of our disclosure controls and procedures, we will need to commit significant resources, hire additional staff and provide additional management oversight. We will be implementing additional procedures and processes for the purpose of addressing the standards and requirements applicable to public companies.

Unanticipated changes in the insurance market or factors affecting self-insurance reserve estimates could have a material adverse effect on our business, financial condition and results of operations.

We use a combination of insurance and self-insurance coverage to provide for potential liabilities for workers' compensation, general liability, property losses, auto liability, directors and officers liability, pharmacy liability and employee health care benefits. However, there are types of losses we may incur but against which we cannot be insured or which we believe are not economically reasonable to insure, such as losses due to acts of war, employee and certain other crime, certain wage and hour and other employment-related claims, including class actions, actions based on certain customer protection laws, certain cyber events and some natural and other disasters or similar events. If we incur these losses and they are material, our business could suffer. Liabilities associated with the risks that are retained by us are determined, based in part, by considering historical claims experience, severity factors, inflation, and other actuarial assumptions. Our determination of the risk we retain is subject to a high degree of variability related to, among other things, future interest and inflation rates, future economic conditions, litigation trends and benefit-level changes. Any deviation of actual claims and other expenses related to these and other risks in excess of our assumptions, estimates, and historical trends, may have a material adverse effect on our business, financial condition and results of operations.

We are currently operating in a period of economic uncertainty and capital markets disruption, which has been significantly impacted by geopolitical instability due to the ongoing military conflict between Russia and Ukraine.

U.S. and global markets are experiencing volatility and disruption following the escalation of geopolitical tensions and the start of the military conflict between Russia and Ukraine. In February 2022, Russia launched a full-scale military invasion of Ukraine. Although the length and impact of the ongoing military conflict is highly unpredictable, the conflict in Ukraine could lead to market disruptions, including significant volatility in commodity prices, credit and capital markets. Additionally, Russia's prior annexation of Crimea, recent recognition of two separatist republics in the Donetsk and Luhansk regions of Ukraine and subsequent military interventions in Ukraine have led to sanctions and other penalties being levied by the United States, European Union and other countries against Russia, Belarus, the Crimea Region of Ukraine, the so-called Donetsk People's Republic, and the so-called Luhansk People's Republic, including agreement to remove certain Russian financial institutions from the Society for Worldwide Interbank Financial Telecommunication (SWIFT) payment system. Additional potential sanctions and penalties have also been proposed and/or threatened. Russian military actions and the resulting sanctions could adversely affect the global economy and financial markets and lead to instability and lack of liquidity in capital markets, potentially making it more difficult for us to obtain additional funds. Any of the abovementioned factors could affect our business, prospects, financial condition, and operating results. The extent and duration of the military action, sanctions and resulting market disruptions are impossible to predict, but could be substantial. Any such disruptions may also magnify the impact of other risks described in this registration statement on Form S-1.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements contained in this prospectus, which reflect our current views with respect to future events and financial performance, and any other statements of a future or forward-looking nature constitute "forward-looking statements" within the meaning of the federal securities laws. We intend the forward-looking statements to be covered by the applicable safe harbor under the federal securities laws. In some cases, you can identify forward-looking statements by terms such as "may," "should," "could," "would," "predicts," "potential," "continue," "expects," "anticipates," "future," "intends," "plans," "believes," "estimates," or the negative of these terms or other similar expressions, as well as statements in future tense, identify forward-looking statements. Forward-looking statements should not be read as a guarantee of future performance or results and may not be accurate indications of when such performance or results will be achieved. Forward-looking statements are based on the information we have when the statements are made or management's good faith belief as of that time with respect to future events and are subject to significant risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements.

Forward-looking statements necessarily involve risks and uncertainties, and our actual results could differ materially from those anticipated in the forward-looking statements due to a number of factors, including those set forth above under "Risk Factors" and elsewhere in this prospectus. The factors set forth above under "Risk Factors" and other cautionary statements made in this prospectus should be read and understood as being applicable to all related forward-looking statements wherever they appear in this prospectus. The forward-looking statements contained in this prospectus represent our judgment as of the date of this prospectus. We caution readers not to place undue reliance on such statements. We operate in an evolving environment where new risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason, even if new information becomes available or other events occur in the future. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the cautionary statements contained above and throughout this prospectus.

INDUSTRY AND OTHER DATA

We obtained the industry, market and competitive position data in this prospectus from our own internal estimates and research as well as from industry and general publications and research, surveys and studies conducted by third parties. Information that is based on estimates, forecasts, 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 based on various factors, including those discussed in "Risk Factors."

TRADEMARKS, SERVICE MARKS AND TRADE NAMES

We own or have rights to use a number of registered and common law trademarks, service marks and/or trade names in connection with our business in the United States and/or in certain foreign jurisdictions.

Solely for convenience, the trademarks, service marks, logos and trade names referred to in this prospectus are without the ® and ™ 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 rights of the applicable licensors to these trademarks, service marks and trade names. This prospectus contains additional trademarks, service marks and trade names of others, which are the property of their respective owners. All trademarks, service marks and trade names appearing in this prospectus are, to our knowledge, the property of their respective owners. We do not intend our use or display of other companies' trademarks, service marks, copyrights or trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of the common stock we are offering will be approximately $ million. If the underwriters fully exercise the over-allotment option, the net proceeds of the common stock we sell will be approximately $ million. These assume an initial public offering price of $ per share, the midpoint of the estimated initial public offering price range set forth on the cover page of this prospectus. "Net proceeds" is what we expect to receive after deducting the underwriting discount and commission and estimated offering expenses payable by us. We intend to use the net proceeds from this offering, along with our existing cash and cash equivalents, as follows:

- approximately $10-15 million to fund the planned Phase 2 trial of THIO for NSCLC indication (THIO-101);
- approximately $2-4 million to fund the planned Phase 2 trial of THIO for CRC indication (THIO-102);
- approximately $3-5 million to fund pre-clinical to IND development for two second-generation telomere targeting compounds;
- the remaining proceeds to fund our other research and development activities, as well as for working capital and other general corporate purposes.

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the estimated initial public offering price range set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us from this offering by $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the underwriting discount and commission and estimated offering expenses payable by us in connection with this offering.

The net proceeds from this offering, together with our cash, will not be sufficient for us to fund any of our product candidates through regulatory approval, and we will need to raise additional capital to complete the development and commercialization of our product candidates. 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. This expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering or the amounts that we will actually spend. 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 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 have significant discretion in the use of any net proceeds and Investors will be relying on the judgment of our management regarding the application of the proceeds.

Based on our planned use of the net proceeds from this offering and our existing cash, we estimate that such funds will be sufficient to enable us to fund our operating expenses and capital expenditure requirements for at least the next 36 months. In particular, we expect that these capital resources will allow us to fund:

- our planned Phase 2 trial of THIO through completion; and
- our planned pre-clinical to IND development for two second-generation telomere targeting compounds.

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. Our existing cash and cash equivalents as of the date of this prospectus, together with the estimated net proceeds from this offering, may or may not be sufficient to fund development of our product candidates through regulatory approval and commercialization. To obtain the capital necessary to fund our product candidates through regulatory approval and commercialization, we expect to finance our cash needs through public or private equity offerings, debt financings and/or other capital sources which may include strategic collaborations, licensing arrangements or other arrangements with third parties.

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 have never declared or paid any cash dividends on our common stock and we do not anticipate paying any cash dividends in the foreseeable future. Investors should not purchase our common stock with the expectation of receiving cash dividends. The payment of dividends, if any, in the future is within the discretion of our Board of Directors and will depend on our earnings, capital requirements and financial condition and other relevant facts. We currently intend to retain all future earnings, if any, to finance the development and growth of our business.

CAPITALIZATION

The following table sets forth our cash and capitalization as of December 31, 2021:

- on an actual basis;
- on a pro forma basis to give effect to the sale of 263,729 shares of our common stock at $9.00 per share for gross proceeds of $2,373,561 before transaction costs and expenses since December 31, 2021 sold in the Crossover Round, issuance of any Ratchet Shares to the Crossover Investors, and to give effect to the sale of common stock in this offering, assuming no exercise of the underwriters' option to purchase additional shares, at an assumed initial public offering price of $ per share, which is the midpoint of the estimated initial public offering price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and the application of the proceeds therefrom as described in "Use of Proceeds."

The information below is illustrative only, and our capitalization following the completion of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read the information in this table together with our financial statements and accompanying notes appearing at the end of this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Description of Capital Stock" sections of this prospectus.

	As of December 31, 2021	
	Actual	Pro Forma As Adjusted
Cash	$ 10,574,292	$ —
Stockholders' Equity:		
Preferred stock, $0.0001 par value, 70,000,000 shares authorized, no shares issued and outstanding, actual; and 30,000,000 shares authorized, and no shares outstanding pro forma	—	—
Common stock, $0.0001 par value, 30,000,000 shares authorized, 7,584,980 shares issued and outstanding, actual; and 70,000,000 shares authorized, and shares issued and outstanding pro forma	758	—
Additional paid-in capital	37,618,438	—
Accumulated deficit	(28,437,993)	
Total stockholders' equity:	9,181,203	—
Total capitalization:	$ 9,181,203	$ —

The number of shares of common stock issued and outstanding and pro forma in the table above is based on 7,584,980 shares of our common stock outstanding as of December 31, 2021, and excludes the following:

- 5,012,181 shares of common stock issuable upon exercise of options to purchase shares of common stock outstanding as of December 31, 2021, with a weighted-average exercise price of $1.91 per share;
- 331,815 shares of common stock reserved for future issuance as of December 31, 2021, under our 2020 Plan;
- shares of common stock reserved for issuance under our 2021 Equity Incentive Plan that we intend to adopt in connection with this offering;
- warrants to purchase 1,311,117 shares of common stock; and
- 58,333 shares of common stock issuable upon the settlement of outstanding restricted common stock awards.

DILUTION

If you purchase common stock in this offering, your interest will be diluted immediately to the extent of the difference between the assumed initial public offering price of $ per share and the net tangible book value per share of our common stock immediately upon the consummation of this offering.

The net tangible book value of our common stock as of December 31, 2021, was $9.18 million, or $1.21 per share. Net tangible book value per share of our common stock represents our total tangible assets (total assets less intangible assets) less total liabilities divided by the number of shares of common stock outstanding as of that date.

Net tangible book value dilution per share to new investors represents the difference between the amount per share paid by purchasers in this offering and the as adjusted net tangible book value per share of common stock immediately after completion of this offering. After giving effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the estimated initial public offering price range set forth on the cover page of this prospectus, and after deducting underwriters' commissions and estimated offering expenses, our as adjusted net tangible book value as of December 31, 2021, would have been $ million, or $ per share. This represents an immediate increase in net tangible book value of $ per share to existing stockholders and an immediate dilution in net tangible book value of $ per share to purchasers of securities in this offering, as illustrated in the following table:

Assumed initial public offering price per share		$ —
Net tangible book value per share as of December 31, 2021	$ 1.21	
Increase in net tangible book value per share attributable to new investors	$ —	
As adjusted net tangible book value per share as of December 31, 2021, after giving effect to the offering	$ —	
Dilution per share to new investors in the offering		$ —

A $1.00 increase (or decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the estimated initial public offering price range set forth on the cover page of this prospectus, would increase (or decrease) the as adjusted net tangible book value per share after this offering by approximately $, and dilution in 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 in full to purchase additional shares of common stock in this offering at the assumed offering price of $ per unit, the net tangible book value per share after this offering would be $ per share, the increase in the net tangible book value per share to existing stockholders would be $ per share and the dilution to new investors purchasing common stock in this offering would be $ per share.

To the extent that outstanding exercisable options or warrants are exercised, you may experience further dilution.

In addition, we may choose to raise additional capital due to market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that we raise additional capital by issuing equity securities or convertible debt, your ownership will be further diluted.

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

You should read the following discussion together with our financial statements and the related notes included elsewhere in this prospectus. This discussion contains forward-looking statements that are based on our current expectations, estimates and projections about our business and operations. Our actual results may differ materially from those currently anticipated and expressed in such forward-looking statements as a result of a number of factors, including those which we discuss under "Risk Factors" and elsewhere in this prospectus. See "Cautionary Note Regarding Forward-Looking Statements."

Overview

We are a clinical stage biotechnology company engaged in the discovery, development and commercialization of therapies targeting cancer. Our initial disease target is lung cancer, a serious medical condition with an incidence of over 235,000 new cases in the US in 2021, representing 12.4% of all cancers, and over 131,000 deaths, or 21.7% of all cancers. Worldwide, lung cancer incidence is over 2,200,000 per year (ranking second only after breast cancer), and mortality over 1,800,000 (ranking first). Specifically, we are targeting Non-Small Cell Lung Cancer (NSCLC), which represents 85% of all lung cancers.

We accomplished the following key milestones:

- In November 2018, we in-licensed THIO from University of Texas Southwestern, in Dallas. The patent license is global and exclusive for the duration of the patients' lives.
- In 2019, we completed a common stock seed round in the amount of $2 million.
- In 2019, we generated the first data for THIO demonstrating complete regression with no recurrence when administered in advance of atezolizumab (TecentriQ®; Genentech), in colorectal and lung cancer preclinical models.
- In the First Quarter 2020, we filed a provisional patent application for THIO in sequential combination with checkpoint inhibitors, covering all tumor types. The patent was allowed in the US in the First Quarter 2021 and expires in 2041.
- In the First Quarter 2021, we entered into a Drug Supply Agreement with Regeneron Pharmaceuticals, Inc. Under this agreement, Regeneron will provide cemiplimab (LIBTAYO; anti-PD-1 checkpoint inhibitor) at no charge for the THIO-101 trials, testing THIO administration for immune activation followed by cemiplimab in NSCLC. This drug supply agreement replaces direct drug purchase expense that we would be otherwise required to incur. In exchange, Regeneron received development exclusivity in NSCLC for the duration of the trial which is expected to be two years, meaning we cannot conduct trials in NSCLC with another checkpoint inhibitor during the time of the trial. All other areas of study and development in any other tumor types remain open.
- In the First Quarter 2021, we initiated our clinical supply manufacturing (CMC) under Good Manufacturing Practices (GMP) conditions to provide clinical supply for THIO-101 and other development needs.
- In the Second Quarter 2021, we completed a convertible note funding round in the amount of approximately $8 million.
- In the Third Quarter 2021 and Fourth Quarter2021, we sold common shares of MAIA for total proceeds of approximately $6.2 million. After this round, we believe we have raised sufficient capital to fund the THIO-101 lead-in and preliminary efficacy of the phase 2 THIO-101 trial.
- In the First Quarter 2022, we completed the Crossover Round for total proceeds of approximately $2.4 million.
- In the First Quarter 2022, THIO received approval by the Bellberry Human Research Ethics Committee (HREC) in Australia to initiate the THIO-101 Phase 2 clinical study.

Impact of the COVID-19 Pandemic on Our Operations

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency because of a new strain of coronavirus originating in Wuhan, China (the "COVID-19 Outbreak") and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the WHO classified the COVID-19 Outbreak as a pandemic, based on the rapid increase in exposure globally.

The full impact of the COVID-19 Outbreak continues to evolve as of the date of this report. As a result, we cannot estimate the full magnitude that the pandemic will have on our business. If the COVID-19 Outbreak continues, it may have a material adverse effect on our financial condition, liquidity, and future results of operations for the future. We are actively monitoring the impact of the global pandemic on our financial condition, liquidity, operations, industry, and workforce. Given the daily evolution of the COVID-19 Outbreak and the global responses to curb its spread, we are not able to estimate the effects of the COVID-19 Outbreak on our results of operations, financial condition, or liquidity for the future. While we have not currently experienced any potential delays or increased costs as a result of these measures, we may do so in the future.

Impact of the War in Ukraine on Our Operations

The short and long-term implications of Russia's invasion of Ukraine are difficult to predict at this time. The imposition of sanctions and counter sanctions may have an adverse effect on the economic markets generally and could impact our business, financial condition, and results of operations. Because of the highly uncertain and dynamic nature of these events, it is not currently possible to estimate the impact of the Russian – Ukraine war on our business.

Financial Operations Overview and Analysis For the Years Ended December 31, 2021 and 2020

Comparison of the Years Ended December 31, 2021 and 2020

	Year Ended December 31,		Change	
	2021	2020	Dollars	Percentage
Operating expenses:				
Research and development expenses	$ 3,496,796	$ 1,412,409	$ 2,084,387	148%
General and administrative expenses	4,289,831	5,563,192	(1,273,361)	(23)%
Total operating costs and expenses	7,786,627	6,975,601	811,026	12%
Loss from operations	(7,786,627)	(6,975,601)	(811,026)	(12)%
Other income (expense):				
Paycheck protection program loan forgiveness	62,500	62,500	—	—%
Interest expense	(827,539)	(32,226)	(795,313)	(2468)%
Interest Income	2,012	679	1,333	196%
Australian research and development incentives	43,666	—	43,666	100%
Change in fair value of embedded features	(203,000)	5,000	(208,000)	(4160)%
Change in fair value of warrant liability	(1,546,280)	(19,600)	(1,526,680)	(7789)%
Loss on extinguishment of convertible notes and convertible notes, related parties	(2,322,943)	—	(2,322,943)	(100)%
Other income (expense), net	(4,791,584)	16,353	(4,807,937)	(29401)%
Net loss	(12,578,211)	(6,959,248)	(5,618,963)	(81)%
Net loss attributable to noncontrolling interests	(74,331)	(322,588)	248,257	77%
Net loss attributable to MAIA Biotechnology, Inc. shareholders	$ (12,503,880)	$ (6,636,660)	$ (5,867,220)	(88)%

Operating Expenses

Research and development expenses

Research and development expenses increased by approximately $2,084,000 or 148%, from approximately $1,412,000 for the year ended December 31, 2020 to approximately $3,497,000 for the year ended December 31, 2021. The increase was primarily related to the increase in clinical expenses related to the clinical preparation of THIO of approximately $802,000, an increase in stock based compensation costs of approximately $518,000 related to employee options granted during fiscal year 2021, an increase in payroll and bonus expenses of approximately $384,000 related to increased headcount of two employees during fiscal year 2021 and bonus accruals for certain executive members of management, an increase in professional fees of approximately $326,000, and an increase in other expenses related to research and development of approximately $56,000.

General and administrative expenses

General and administrative expenses decreased by approximately $1,273,000 or 23% from approximately $5,563,000 for the year ended December 31, 2020 to approximately $4,290,000 for the year ended December 31, 2021. The decrease was primarily related to a decrease in stock based compensation expense of approximately $1,733,000 and a decrease in payroll and bonus expense of approximately $448,000, offset by an increase in professional fess of approximately $636,000, an increase in the state of Delaware business franchise tax of approximately $37,000, and an increase in other general and administrative expenses of approximately $188,000.

Other income (expense), net

Other income (expense), net changed approximately $4,808,000 from other income of approximately $16,000 for the year ended December 31, 2020 to other expense of approximately $4,792,000 for the year ended December 31, 2021. The change in other income (expense), net was primarily the result of a loss on extinguishment of convertible notes and convertible notes of approximately $2,323,000, an increase in interest expense of approximately $795,000 related to the issuance of additional convertible notes payable issued during the year ended December 31, 2021, and approximately $44,000 related to a research and development incentive. Additionally, other income (expense), net changed by approximately $208,000 and $1,527,000 for the embedded features and warrants related to the convertible notes payable, respectively, due to the increase of the fair value of the mark-to-market adjustments recorded.

Liquidity and Capital Resources

The following table presents selected financial information and statistics as of and for the years ended December 31, 2021 and 2020:

Years Ended December 31, 2021 and 2020

	Year Ended December 31,	
	2021	2020
Balance Sheet Data:		
Cash	$ 10,574,292	$ 663,457
Working Capital (Deficit)	8,526,499	(947,239)
Total assets	11,327,199	746,505
Convertible notes payable - current portion	—	10,586
Loan payable to officer	—	21,367
Convertible notes payable, net of current portion	—	332,841
Convertible notes payable, related parties	—	98,960
Derivative liability for embedded conversion features on convertible notes payable and convertible notes payable, related parties	—	127,000
Warrant liability	—	85,260
Simple agreement for future equity payable	—	25,000
Total stockholders' equity (deficit)	$ 9,181,203	$ (1,616,300)
Statement of Cash Flow Data:		
Net cash flows used in operating activities	$ (4,122,896)	$ (1,844,163)
Net cash flows provided by investing activities	—	—
Net cash flows provided by financing activities	14,033,731	798,055
Net increase (decrease) in cash and cash equivalents	$ 9,910,835	$ (1,046,108)

Capital Resources

As of December 31, 2021, our available cash totaled approximately $10,574,000 which represented an increase of approximately $9,911,000 compared to December 31, 2020. As of December 31, 2021, we had working capital of approximately $8,526,000 which represents an increase of approximately $9,473,000 compared to December 31, 2020. We have generated no revenues as of December 31, 2021, and we expect to continue to incur operating losses for the foreseeable future, and may never become profitable. We are dependent on our ability to continue to raise equity and/or debt financing to continue operations, and the attainment of profitable operations.

Management believes that the Company's existing cash and cash equivalents will allow the Company to continue its operations at least into the Second Quarter 2023. As a result of recurring losses, the continued viability of the Company beyond the Second Quarter 2023 is dependent on its ability to continue to raise additional capital to finance its operations.

Paycheck Protection Program Loan

On January 31, 2021, we received a second PPP loan with a bank in the amount of $62,500. Under the terms of the PPP loan, interest accrued on the outstanding principal at the rate of 1% per annum. The Company used the entire PPP Loan for qualifying expenses. The Company received full forgiveness of all outstanding principal and accrued and unpaid interest on the PPP Loan in November 2021 in the amount of $62,500.

Convertible Notes

Between August 2019 and June 2021, we issued unsecured convertible notes payable to investors for a total of $8,010,000. The notes bore simple interest at rates between 6% and 8% per annum and were to mature two years from issuance. The notes also contained an automatic conversion feature, such that in the event we consummate an equity financing, as defined in the agreement, prior to the notes' maturity, the outstanding principal and interest would be converted into shares of the Company which may be issued in connection with such equity financing. These notes were automatically converted into shares of the Company's common stock on September 30, 2021 at $6.00 per share as a result of the sale of common stock which qualified as an equity financing in accordance with the

terms of the convertible note agreements. As of December 31, 2021 there were no convertible notes payable outstanding.

Sale of Common Stock

Between July 18, 2021 and December 31, 2021, the Company sold 772,563 shares of common stock at $8.00 per share for gross proceeds of approximately $6.2 million.

In connection with the sale of common stock, the Company converted all $8,010,000 of its outstanding principal and all accrued and unpaid interest of approximately $240,000 related to the Company's 2019 Convertible Notes, 2020 Convertible Notes, and 2021 Convertible Notes into 1,375,228 shares of the Company's common stock on September 30, 2021.

Additionally, during January and February 2022, the Company sold 263,729 shares of common stock at $9 per share for gross proceeds of $2,373,561 before transaction costs and expenses.

We will need to raise additional capital to fund our operations, to develop and commercialize THIO, and to develop, acquire or in-license other products. We may seek to fund our operations through public equity, private equity, or debt financings, as well as other sources. We cannot make any assurances that additional financings will be available to us and, if available, on acceptable terms or at all. This could negatively impact our business and operations and could also lead to the reduction of our operations. We believe that we currently have sufficient funds to support operations through the next 12 months from the date of this filing.

Cash Flows

Operating Activities

For the year ended December 31, 2021, net cash used in operating activities was approximately $4,123,000, which consisted of a consolidated net loss of approximately $12,578,000 offset by non-cash charges of approximately $7,330,000 which primarily includes approximately $2,723,000 in stock-based compensation, a loss of approximately $203,000 related to the change in fair value of embedded features related to convertible notes, a loss of approximately $1,546,000 related to the changes in the fair value of the warrant liability, and amortization of debt discount on convertible notes of approximately $597,000, offset by a gain from forgiveness of Payroll Protection Plan loan of approximately $63,000. Total changes in operating assets and liabilities of approximately $1,126,000 were primarily driven by an approximate $806,000 increase in accounts payable, and an approximate $1,261,000 increase in accrued expenses, offset by an approximate $7,000 decrease in related party payables, an approximate $15,000 increase in prepaid expenses and other current assets, an approximate $264,000 increase in deferred compensation, and an approximate $652,000 increase in deferred offering costs.

For the year ended December 31, 2020, net cash used in operating activities was approximately $1,844,000, which consisted of a net loss of approximately $6,959,000 offset by non-cash charges of approximately $3,861,000 which primarily includes approximately $3,889,000 in stock-based compensation offset by approximately $63,000 related to gain from forgiveness of Paycheck Protection Program loan and a loss of approximately $5,000 related to the change in fair value of embedded features related to convertible notes offset by changes in the fair value of the warrant liability of approximately $20,000 and amortization of debt discount on convertible notes of approximately $20,000. Total changes in operating assets and liabilities of approximately $1,254,000 were primarily driven by an approximately $824,000 increase in accrued expenses, an approximate $483,000 increase in deferred compensation, an approximate $5,000 increase in related party payables offset by an approximate $58,000 increase in prepaid expenses and other current assets.

Financing Activities

Net cash provided by financing activities for the year ended December 31, 2021 was approximately $14,034,000 which consisted primarily of proceeds from issuance of convertible notes totaling approximately $7,369,000, collections of subscriptions receivable of approximately $322,000 for MAIA, proceeds from issuance of common stock (net of transaction costs) of approximately $5,742,000, proceeds from the paycheck protection program loan totaling $63,000, proceeds from exercise of warrants of approximately $529,000 for MAIA, and proceeds from exercise of stock options of approximately $9,000 for MAIA.

Net cash provided by financing activities for the year ended December 31, 2020 was approximately $798,000 which consisted of proceeds from issuance of convertible notes totaling approximately $610,000, collections of subscriptions receivable of approximately $102,000 and approximately $35,000 for MAIA and DGD, respectively, proceeds from the paycheck protection program loan totaling approximately $63,000, and proceeds from the issuance of common stock of DGD totaling approximately $50,000, offset by return of capital - DGD Pharmaceuticals Corporation totaling approximately $58,000, and payment on loan payable to officer of approximately $4,000.

Critical Accounting Policies and Significant Judgments and Estimates

Management's discussion and analysis of our financial condition and results of our operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these financial statements requires us to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities as of the date of the balance sheet and the reported amounts of expenses during the reporting period. In accordance with U.S. GAAP, we evaluate estimates and judgments on an ongoing basis. The most significant estimates relate to the valuation of common stock, the valuation of stock options and warrants, embedded features in convertible notes, and the valuation allowance of deferred tax assets resulting from net operating losses. We base our estimates and assumptions on current facts, historical experiences, and 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 define our critical accounting policies as those accounting principles that require it to make subjective estimates and judgments about matters that are uncertain and are likely to have a material impact on our financial condition and results of operations, as well as the specific manner in which we apply those principles. While our significant accounting policies are more fully described in Note 1 to our financial statements, we believe the following are the critical accounting policies used in the preparation of its financial statements that require significant estimates and judgments.

Fair value of common stock

For all periods prior to this offering, there was no public market for our common stock. The Company sold shares of its common stock to third parties beginning in September 2018 through June 2019 at $1.80 per share. Subsequent to July 2019 the fair value of the shares of common stock underlying our stock-based awards was estimated by our board of directors based in part on valuations until we began selling shares of our common stock to third parties beginning on July 18, 2021 at $8.00 per share. To determine the fair value of our common stock underlying annual option grants to officers and directors, our board of directors considered, among other things, input from management, valuations of our common stock valuation firms in accordance with the guidance provided by the American Institute of Certified Public Accountants 2013 Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation, and our board of directors' assessment of additional objective and subjective factors that it believed were relevant, and factors that may have changed from the date of the most recent valuation through the date of the grant.

These factors included, but were not limited to:

- our results of operations and financial position, including our levels of available capital resources;
- our stage of development and material risks related to our business;
- our business conditions and projections;
- the valuation of publicly traded companies in the life sciences industry sectors, as well as recently completed mergers and acquisitions of peer companies;
- the lack of marketability of our common stock as a private company;
- the likelihood of achieving a liquidity event for our security holders, such as an initial public offering or a sale of our company, given prevailing market conditions;
- the hiring of key personnel and the experience and expertise of management;
- trends and developments in our industry; and
- external market conditions affecting the life sciences industry sectors.

Our valuation as of February 28, 2021 indicated a fair value of our common stock of $1.83 per share. For grants of stock awards and stock option awards during the period February 28, 2021 through July 12, 2021, management set the exercise prices for those awards based on the February 28, 2021 valuation until the Company initiated the sale of common stock at $8.00 per share which was first competed on July 18, 2021 and followed by additional sales through September 26, 2021. The Company set the exercise price of awards granted from July 18, 2021 through October 30, 2021 at $8.00 per share.

In evaluating the fair value of our common stock during the period March 2021 through May 2021, management evaluated events and their potential impact on the estimated fair value per share of the common stock. We considered events during this period which would have an effect on the fair value of our common stock such as milestones related to the clinical development and operations of our drug substances and advances in the production of drug substances and our drug product, however, there were no specific events that would indicate a definitive change in the value of the Company.

Given that there were no specific events that caused the change in fair value of our common stock from the indicated value of $1.83 as of February 28, 2021 to the $8.00 per share realized from the sale of common stock initiated in mid July, we performed a retrospective valuation of our common stock as of April 30, 2021. The retrospective valuation as of April 30, 2021 also indicated a fair value of our common stock of $1.83. In estimating the fair value of stock and stock option awards, we used an estimated fair value of $1.83 for awards granted from February 28, 2021 through May 31, 2021, based on the February 28, 2021 and April 30, 2021 valuations. From June 1, 2021 through October 30, 2021, we used an estimated of fair value of our common stock of $8.00 in valuing our stock and stock option awards. We believe the fair values based on the valuations materially represents the fair value of our common stock during the period February 28, 2021 through May 31, 2021 since no single intervening specific event indicated a definitive change in the value of the Company.

The February 28, 2021 and the April 30, 2021 valuations used the income approach and the market approach in estimating the fair value of our common stock. The market approach utilized guideline public companies in estimating fair value of our stock. The income approach estimates enterprise value based on the estimated present value of future cash flows the business is expected to generate over its remaining life. The estimated present value is calculated using a discount rate reflective of the risks associated with an investment in a similar company in a similar industry or having a similar history of revenue growth. The market approach measures the value of a business through an analysis of recent sales or offerings of comparable investments or assets, and in our case, focused on comparing us to a group of our peer companies. In applying this method, valuation multiples are derived from historical and projected operating data of the peer company group. We then apply the selected multiples to our operating data to arrive at a range of indicated enterprise values of the Company. We then subtracted the net debt to determine equity value.

During November 2021 and December 2021, the fair value of the Company’s common stock was determined to be $8.69 and $8.87, respectively. For our valuations of common stock performed November 2021 and December 2021, we used a hybrid method of the Option Pricing Method ("OPM”) and the Probability-Weighted Expected Return Method ("PWERM”). PWERM considers various potential liquidity outcomes. Our approach included the use of an initial public offering scenario, a scenario assuming continued operation as a private entity, and a dissolution scenario. Under the hybrid OPM and PWERM, the per share value calculated under the OPM and PWERM are weighted based on expected exit outcomes and the quality of the information specific to each allocation methodology to arrive at a final estimated fair value per share of the common stock before a discount for lack of marketability is applied.

To determine the fair value of our common stock, we first determined our enterprise value using accepted valuation approaches; adjusted these valuation approaches with relevant discounts; weighted the results appropriately; and then allocated the equity value to our common stock and common stock equivalents. Our enterprise value was estimated using two generally accepted approaches: the income approach and the market approach. The income approach estimates enterprise value based on the estimated present value of future cash flows the business is expected to generate over its remaining life. The estimated present value is calculated using a discount rate reflective of the risks associated with an investment in a similar company in a similar industry or having a similar history of revenue growth. The market approach measures the value of a business through an analysis of recent sales or offerings of comparable investments or assets, and in our case, focused on comparing us to a group of our peer companies. In applying this method, valuation multiples are derived from historical and projected operating data of

the peer company group. We then apply the selected multiples to our operating data to arrive at a range of indicated enterprise values of the Company. We then subtracted the net debt to determine equity value.

Following this offering, it will not be necessary to determine the fair value of our common stock, as our shares will be traded in the public market.

The fair values of DGD and THIO common stock have been based on sales of common stock to third parties for the year ended December 31, 2020 and 2019. There were no issuances of common stock as it relates to DGD or THIO during the year ended December 31, 2021, and each of these entities were legally dissolved on August 13, 2021.

Stock-based compensation

Our stock-based awards are classified as equity (restricted stock awards, stock options, and warrants). We recognize related stock-based compensation expense based on the grant date fair value of the awards. The fair value of restricted stock awards is based on our common stock price. We estimate the fair value of stock options and warrants using the Black-Scholes-Merton valuation model which requires the use of subjective assumptions that could materially impact the estimation of fair value and related compensation expense to be recognized. One of these assumptions include the expected volatility of our stock price. Developing this assumption requires the use of judgment. The Company lacks company-specific historical and implied volatility information. Therefore, we estimate our expected stock volatility based on the historical volatility of a publicly traded set of peer companies. These estimates are highly subjective and once this offering is completed these estimates will no longer be necessary since the fair value will be based on the trading value of the Company's common stock.

Two of the assumptions used in the Black-Scholes-Merton valuation model are historical volatility and fair value of common stock, both of which are subject to uncertainty. Historical volatility is subject to uncertainty due to changes in the market over time. The fair value of our common stock is subject to uncertainty due to the possibility of changes in the results of our clinical trials, which could impact the fair value of our common stock. The total expense related to stock options is material to our financial statements on an annual basis, and significant fluctuations in the volatility assumption or the fair value of our common stock could result in material changes in related compensation expense to be recognized.

BUSINESS

Our Company

We are a clinical-stage biopharmaceutical company developing targeted immunotherapies for cancer. THIO, our lead asset, is an investigational dual mechanism of action drug candidate incorporating telomere targeting and immunogenicity. We completed our selection process for the clinical sites for our Phase 2 study in Australia and Europe and our application to start the Phase 2 study in Australia has been approved. We also plan to submit a similar application in the Second Quarter 2022, to conduct the same Phase 2 study in Europe. Patients with advanced Non-Small Cell Lung Cancer (NSCLC) will be treated first with THIO followed a few days later by the immune checkpoint inhibitor Libtayo® (cemiplimab) manufactured and commercialized by Regeneron. Cemiplimab is a fully human monoclonal antibody targeting the immune checkpoint receptor PD-1 on T-cells. Cemiplimab has been approved in the United States and the rest of the world for multiple cancer indications, including NSCLC. In February 2021, we signed a clinical supply agreement with Regeneron to receive cemiplimab at no cost, which represents a significant cost-savings for the study. In return, we have granted Regeneron exclusive development rights in combination with PD-1 inhibitors for NSCLC for the study period. Based on the clinical data generated by the THIO-101 trial, in late 2024 we plan to seek an accelerated approval of THIO in the United States for the treatment of patients with advanced NSCLC. Even if granted, accelerated approval status does not guarantee an accelerated review or marketing approval by the FDA. In addition, we plan to start activities for a clinical trial of THIO in patients with advanced colorectal cancer in the first quarter of 2023.

Our Lead Product Candidate

THIO (6-thio-dG or 6-thio-2'-deoxyguanosine) is a telomere-targeting agent currently in clinical development to evaluate its activity in NSCLC. Telomeres, along with the enzyme telomerase, play a fundamental role in the survival of cancer cells and their resistance to current therapies. THIO is being developed as a second- or later line of treatment for NSCLC for patients that have progressed beyond the standard-of-care regimen of existing checkpoint inhibitors.

In 2019, our research team discovered that THIO produced telomere modifications and disruption, which ultimately induced cancer-specific innate and adaptive immune responses against immunologically "cold" tumors or tumor types that were unresponsive to immune checkpoint inhibitors. This hypothesis was tested and demonstrated in syngeneic and humanized mouse models. THIO administered to mice in low doses and followed by an immune-checkpoint inhibiting agent, such as an anti-PD-1 or anti-PD-L1 compound, induced complete tumor regression with no tumor recurrence during the 14 weeks of observation. Further, no toxicities were reported in the tumor-free mice. These new findings were published in the highly reputable, peer-reviewed research scientific journal, Cancer Cell in July 2020. Based on these recent discoveries, a new therapeutic approach has been designed to advance THIO into a Phase 2 clinical trial (THIO-101) in patients with advanced NSCLC.

Our regulatory strategy includes a planned filing of an Investigational New Drug application (IND) with the U.S. FDA in the near future. This would allow U.S. sites to participate in the THIO-101 NSCLC trial. The human safety data generated in the first part of 2022 in Australia and Europe would constitute the basis of the IND application. Although we plan to rely solely on the safety and efficacy data we generate in our own clinical trials in support of our planned NDA filing, we take added confidence in the potential tolerability of THIO in light of the fact that the THIO doses we plan to test represent a range of 4 to 40 times lower than the maximum tolerated dose tested in the earlier clinical trials sponsored by the National Cancer Institute in the 1970s. The planned THIO-101 phase 2 trial is intended to be a proof-of-concept study that may be modified depending on interim results to include both primary and secondary endpoints and be consistent with previously approved cancer treatments. Based on the clinical data generated in the THIO-101 study and assuming THIO achieves its intended clinical effect with a manageable safety profile at one of the doses tested in the study, we expect to seek early FDA guidance and agreement for using this clinical trial as basis for requesting an accelerated approval. The FDA instituted its Accelerated Approval Program to allow for earlier approval of drugs that treat serious conditions, and that fill an unmet medical need based on a surrogate endpoint. A surrogate endpoint is a marker, such as a laboratory measurement, radiographic image, physical sign or other measure that is thought to predict clinical benefit, but is not itself a measure of clinical benefit. The use of a surrogate endpoint can considerably shorten the time required prior to receiving FDA approval.

MAIA Biotechnology will still be required to conduct studies to confirm the anticipated clinical benefit. These studies are known as confirmatory trials. If the confirmatory trial shows that the drug actually provides a clinical benefit, then the FDA grants traditional approval for the drug. If the confirmatory trial does not show that the drug provides clinical benefit, FDA has regulatory procedures in place that could lead to removing the drug from the market. The FDA's accelerated approval pathway, even if initially granted, does not guarantee an accelerated review or marketing approval by the FDA. The THIO-101 study protocol may need to be amended to increase the number of patients enrolled, undergo modification of the statistical analysis or change in the trial design and/or primary endpoints.

Our Science--Driven Telomere Targeting Approach

Telomeres are regions of repetitive DNA nucleotide sequences that are associated with specialized proteins at the ends of linear chromosomes in cells. THIO's mechanism of action comprises telomere targeting and induction of anti-cancer immunogenicity. The enzyme telomerase recognizes THIO's metabolite formed *in situ* and incorporates it into the structure of the cancer cell's telomeres, creating a faulty structure, which breaks apart the telomere spatial structure. As a result, the telomeric structure unwinds and the cancer cells die. We believe THIO transforms "cold" tumors into "hot" tumors rendering them responsive to immunotherapy (checkpoint inhibitors) and this process takes place promptly within 24 to 72 hours. We believe we can improve the immunotherapy efficacy and we can restore the immunotherapy efficacy in patients who have progressed or developed resistance to prior immunotherapy.

Telomere maintenance is essential for cell proliferation and resilience in cancer cells, and thus represents one of the key therapeutic targets for cancer treatment. Telomerase is an enzyme that is present in a majority of human cancer cells (over 85% in the aggregate), across various tumor types. In contrast, its activity is detected in less than 1% of normal cells. THIO has only been shown to be active in cancer cells that are telomerase positive (TERT+). Cancer cells are constantly telomerase positive due to an uncontrolled division process, while a relatively small number of normal cells are telomerase positive only transiently. Therefore, THIO activity is expected to be highly specific to cancer cells versus normal cells. Cancer-specific disturbance of telomeric structure, mediated by telomerase, is likely to lead to disruption in the cell cycle, followed by a very rapid and telomere-length independent cell death. THIO was observed to induce cancer-specific telomere disruption, by using the enzyme telomerase which differentiates THIO from all other available cancer therapies currently in clinical use. We are also currently developing potential next-generation small molecule telomere modifying agents with the goal of identifying additional proprietary drug candidates, across multiple cancer types.

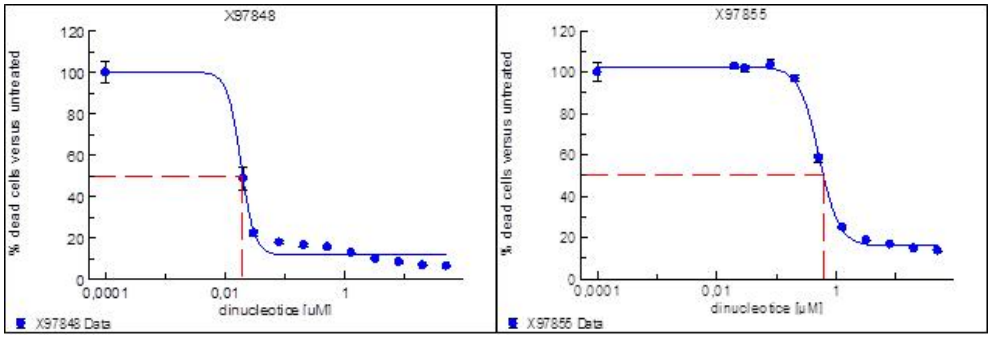
Our Second Generation Target Candidates

Our THIO program drives our development pipeline of second-generation telomere targeting agents. We have initiated an early-stage research and discovery program aimed at identifying new compounds capable of acting through similar mechanisms of activity as THIO, such as the targeting and modifying telomeric structures of cancer cells through cancer-cell intrinsic telomerase activity. The main objective for this program is to discover new compounds with potentially improved specificity towards cancer cells relative to normal cells and with increased anticancer activity. This program may also allow us to strengthen our patent portfolio. Our current 2nd-generation pipeline of potential telomere-targeting agents includes five compounds that have successfully undergone *in vitro* inhibitory testing in five cancer models. The data from those studies showed a significantly lower 50% inhibitory concentration (IC50) for those compounds compared to THIO, as reflected in the following figure:

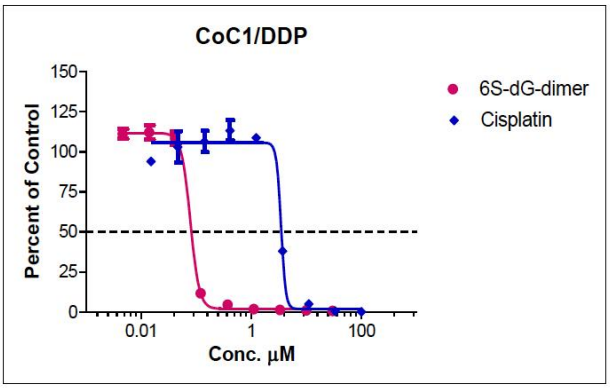
	IC50, μM				
	Cell Lines				
Compound ID	**MC38**	**LLC**	**Hep55-1C**	**H2081**	**HEK293**
THIO(6-thio-dG)	1.5	1.6	5.0	0.92	-*
Compound #5	0.35	0.34	0.35	0.34	0.02
Compound #6	0.35	0.35	0.34	0.34	0.01
Compound #11	0.36	0.80	0.44	0.35	0.63
Compound #12	0.84	0.50	0.77	0.35	0.61

IC50 is the half maximal inhibitory concentration, and it is a measure of the potency of a substance in inhibiting a specific biological or biochemical function, such as cell proliferation. Cell lines: MC38, LLC, Hep55-1C, H2081, and HEK293 are Non-Small Cell Lung Carcinoma, Colorectal, Hepatocellular carcinoma, Small Cell Lung Carcinoma, and Immortalized Human Kidney cell line, respectively. *- Data unavailable

The figures below represent dose-response curves from which IC50 values were derived for second generation compounds #5 (X97848), and #12 (X97855) in HEK293 cells:



The graph below demonstrates the dose response curves for our number five next generation compound, designated as 6S-dG-dimer, in ovarian cancer-derived cell line CoC1/DDP, in comparison with cisplatin (current standard of care in this setting). The corresponding IC50 values are shown next to the plot.



IC50 (µM)

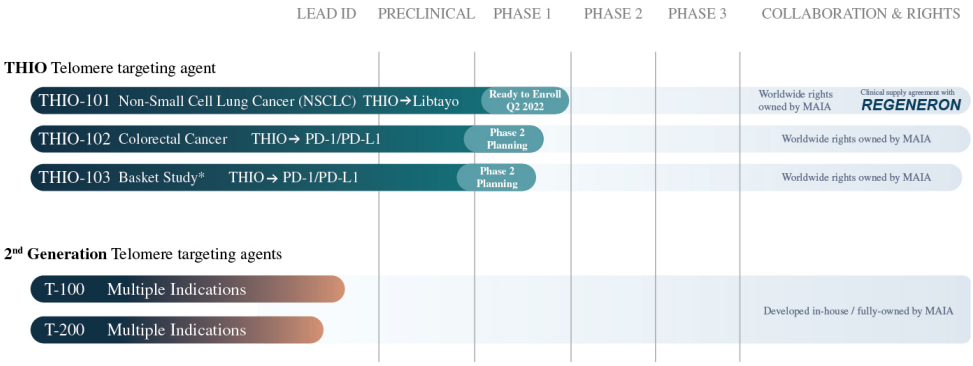
Compound	CoC1/DDP
6S-dG-dimer	0.08
Cisplatin	3.54

Based on the data presented, we have progressed five second-generation compounds to *in vivo* testing, and with proceeds from the IPO, we plan to initiate pre-IND testing for two of them in mid-2022, with the goal of advancing them to clinical trials by the end of 2024.

Although the program is in early stages and we may not be able to identify suitable compounds, we believe we will be able to create a second generation of THIO-like compounds.

OUR PIPELINE

Our robust pipeline includes several targeted immuno-oncology candidates for relapsed and refractory cancers.



*Basket study expected to evaluate: Small Cell Lung Cancer (SCLC), Hepatocellular Carcinoma (HCC), Glioblastoma (GBM), Melanoma, Ovarian, Pancreatic, Breast & Prostate cancers.

Pipeline products are under investigation and have not been proven to be safe or effective. There is no guarantee any product will be approved in the sought-after indication or will meet the developmental milestones set forth above.

Our Strategy

Our goal is to be the leader in the discovery, development and commercialization of cancer telomere targeting agents and other similar small molecules. Our initial focus is to efficiently advance our Phase 2 clinical program with THIO in sequential combination with cemiplimab. Ultimately, we envision positioning THIO as a patient anticancer immunity priming treatment for all immune-activating agents used in the treatment of cancer. To date, THIO has never been tested in clinical trials in combination with any check-point inhibitor. The key elements of our strategy are to:

- Advance our existing clinical programs, including seeking accelerated approval for THIO in NSCLC as a tumor mass-reducing and simultaneously immune system priming agent administered in advance of the immune-activating agent, cemiplimab for treatment of advanced NSCLC, and ultimately, as a cancer treatment foundation in multiple indications and geographies. Even if granted, accelerated approval status does not guarantee an accelerated review or marketing approval by the FDA.
- Broaden the clinical development of THIO by exploring synergistic administration prior to other standard-of care immune-therapies including cell therapy.
- Develop a franchise of telomere-targeting cancer treatments.
- Leverage our regulatory strategy to acquire additional human data faster outside U.S. for other cancer indications.
- Selectively enter into strategic collaborations with pharmaceutical and biotechnology companies that have immune activating therapies.
- Expand our existing intellectual property portfolio.

We will face certain challenges in implementing our business strategy including, among others, the fact that earlier development of THIO was not commercially pursued. Even if THIO successfully advances through clinical studies and towards approval for use, we may face early competition from generic alternatives to THIO after expiration of any applicable regulatory exclusivities.

THIO Market Opportunity and Unmet Medical Need

Most cancer cells are telomerase positive (TERT+), including 73% to 100% of primary human cancers dependent upon tumor type, indicating a significant potential therapeutic utilization for THIO across most of the tumor types. Successful targeting of telomeres in TERT+ cancers represent a significant potential for broad therapeutic utilization.

Tumor Type	TERT(+)	Tumor Type	TERT(+)
Non-Small Cell Lung Cancer (NSCLC)	78%	Pancreatic Cancer	95%
Colorectal (CRC)	82-89%	Small Cell Lung Cancer (SCLC)	100%
Hepatocellular Carcinoma (HCC)	79-86%	Ovarian Cancer	91%
Breast Cancer	88%	Renal Cell Carcinoma (RCC)	83%
Prostate Cancer	90%	Glioblastoma Multiforme (GBM)	75%
Bladder Cancer	92%	Neuroblastoma	94%
head & Neck Squamous Cell Carcinoma (HNSCC)	`86%	Lymphoma (high grade)	100%
Gastric Cancer	85%	Chronic Myeloid Leukemia (CML)	71%
Melanoma	83-86%	Chronic Lymphocytic Leukemia (CLL)	`57%
Cervical Cancer	100%	Acute Myeloid Leukemia (AML)	73%

Sources: A Survey of Telomerase Activity in Human Cancer – JW Shay, S Bacchetti – European Journal of Cancer, 33,5,787-791, 1997. Telomerase Active in Human Liver Tissues; H Tahara, et al; Cancer Research 55, 2734-2736 1995; Highly /aggressive Metastatic Melanoma Cell Unable to Maintain Telomere Length; N Viceconte et al; Cell Reports 2017; and Clinical Relevance of Telomerase Status and Telomerase Activity in Colorectal Cancer; T Femandez et al; PLOS one 2016

Our initial development program will focus on Non-Small Cell Lung Cancer (NSCLC), Colorectal Cancer (CRC), Hepatocellular Carcinoma (HCC) and Small Cell Lung Cancer (SCLC) in areas of clear unmet need and/or areas with deficient immunotherapy effect within each tumor type. Each tumor type and area of unmet or undermet needs represent significant clinical and commercial opportunity. We believe that THIO offers a desirable profile with significant commercial potential.

Tumor Type	Incidence 2020 (M)	Prevalence 2020 (M)	Mortality 2020 (M)	Annual Sales 2020 ($B)	Annual Sales 2028 ($B)
Non-Small Cell Lung Cancer	1.9	2.3	1.5	21.0	32.7
Breast	2.3	7.8	0.7	12.0	15.0
Prostate	1.4	5.0	0.4	8.5	12.8
Colorectal	1.9	5.2	0.9	8.0	10.7
Liver	0.9	1.0	0.8	1.0	5.0
Small Cell Lung Cancer	0.3	0.3	0.3	0.9	2.3

Sources: WHO; Global Data

The table below reflects the current market for check-point inhibitors because there is no current market for THIO-like molecules. The years in the indication columns on the table below signify the timing of FDA approval in the US for the clinical indications of interest. Because the key element of our strategy is to develop THIO to work in combination with check-point inhibitors, if THIO is eventually approved by the FDA for use in conjunction with check-point inhibitors, this table provides a high-level understanding of the potential market for THIO in that combination.

Current Landscape of Checkpoint Inhibitor Franchises

Drug	Company	2021 Sales ($B)	Indications (tumor types)	NSCLC	SCLC	CRC	HCC
				Year of FDA Approval			
KEYTRUDA *(pembrolizumab)*	Merck	17.2	18	2015	2019	2017	2018
OPDIVO *(nivolumab)*	BMS / Ono	8.6	10	2015	2018	2017	2017
TECENTRIQ *(atezolizumab)*	Genentech / Roche	3.5	5	2016	2019		2020
IMFINZI *(durvalumab)*	AstraZeneca	2.5	2	2018	2020		
TYVYT *(sintilimab)*	Eli Lilly / Innovent	0.9	4				
LIBTAYO *(cemiplimab)*	Regeneron	0.5	3	2021			
BAVENCIO *(avelumab)*	Pfizer / Merck AG	0.4	3				
TBD *(tislelizumab)*	Novartis / BeiGene	0.3	2				
JEMPERLI *(dostarlimab)*	GSK	0.1	1				
TOTAL		33.9					

Source: BioMed Tracker 2022

Intellectual Property

Our goal is to obtain, maintain and enforce patent protection wherever appropriate for our product candidates, formulations, processes, methods and any other proprietary technologies, and operate without infringing on the proprietary rights of other parties, both in the United States and in other countries. Our practice is to actively seek to obtain, where appropriate, intellectual property protection for our current product candidates and any future product candidates, proprietary information, and proprietary technology through a combination of patents, protection of proprietary know-how and trade secrets, and contractual arrangements, both in the United States and abroad. However, full patent protection may not provide us with complete protection against competitors who may seek to circumvent our intellectual property. Our success will depend on the skills, knowledge, experience and know-how of our management research and development personnel, as well as that of our advisors, consultants, and other contractors. To help protect our proprietary know-how that is not patentable, we seek to put in place appropriate

internal policies for the management of confidential information requiring all our employees, consultants, advisors, and other contractors to enter into confidentiality agreements that prohibit the disclosure of confidential information, and which will require disclosure and assignment to us of the ideas, developments, discoveries, and inventions important to our business. See “Risk Factors – Risks Related to our Intellectual Property” for additional information.

We file for patents, both directly and in collaboration with our licensing partners, in the United States with counterparts in certain countries in Europe and certain key market countries in the rest of the world, thereby covering the major pharmaceutical markets.

On December 8, 2020, we entered into an amended and restated agreement (of our prior November 29, 2018 agreement) with The Board of Regents of The University of Texas System on behalf of The University of Texas Southwestern Medical Center (collectively, UTSW). Pursuant to the amended and restated agreement, which we refer to as the UTSW1 Agreement, we obtained (1) an exclusive, worldwide license to develop and commercialize the following patent families, which are generally directed to methods of using THIO and are owned and/or controlled by UTSW:

Title / PCT Application Number
Telomerase Mediated Telomere Altering Compounds / PCT/US2014/33330 (WO2014/168947), issued in the US, MX, NZ and RU (all method of use) pending in BR, CA, CN, EP, HK and SG.
6-Thio-2'-Deoxyguanosine (6-Thio-Dg) Results in Telomerase Dependent Telomere Dysfunction and Cell Death in Various Models of Therapy-Resistant Cancer Cells / PCT/US2017/34706 (WO2017/205756), pending in the US (method of use)
Use of 6-thio-dG to Treat Therapy-Resistant Telomerase positive Pediatric Brain Tumors / PCT/US2019/023596 (WO2019/183482), pending in the US (method of use)
Treatment of Drug Resistant Proliferative Diseases with Telomerase Mediated Telomere Altering Compounds / PCT/US2017/023858 (WO/2017/165675), pending in the US (method of use)

and (2) a non-exclusive worldwide license to develop and commercialize related technology rights. The UTSW1 Agreement includes an exclusive license to US patent no. 10,463,685 (expires April 8, 2034), and pending US patent application nos. 16/450,430 (having an earliest expiration of March 23, 2037, if a patent is granted), 16/304,538 (having an earliest expiration of May 26, 2037, if a patent is granted), and 16/982,979 (having an earliest expiration of March 22, 2039, if a patent is granted). All patents are method of use.

On December 23, 2020, we entered into a second agreement with UTSW, which set forth the agreement between the parties pursuant to the Company exercising its option rights in the UTSW1 Agreement and obtaining additional license rights. Pursuant this second license with UTSW, which we refer to as the UTSW2 Agreement, we obtained (1) an exclusive, worldwide license to develop and commercialize the following UTSW patent family:

Title / PCT Application Number
Sequential Treatment of Cancers Using 6-Thio-dG and Checkpoint Inhibitors / PCT/US2021/022090, pending in the US and PCT (method of use)

and (2) a non-exclusive worldwide license to develop and commercialize related technology rights. The UTSW2 Agreement includes an exclusive license to pending US patent application no. 17/200,539 (having an earliest expiration of March 12, 2041, if a patent is granted). This patent is generally directed to methods of using THIO in combination with immune checkpoint inhibitors.

We continually assess and refine our intellectual property strategy as we develop new technologies and therapeutic candidates. As our business evolves, we may, among other activities, file additional patent applications in pursuit of our intellectual property acquisition and protection strategy, to adapt to competition or to seize potential opportunities.

Our Team

We have assembled an experienced management team with deep research, development, and commercialization experience in the areas of telomere-related science, immunotherapy, and across a vast array of oncology indications.

Key Team highlights:

- Our team is led by our Co-founder, Chief Executive Officer and President Vlad Vitoc. He is an M.D. and M.B.A. with over 22 years of experience in the Pharmaceuticals and Biotechnology industries. He has served on leadership teams in various oncology companies and business units and has a track record of success at Bayer Pharmaceuticals, Astellas Pharma Inc., Cephalon Inc. and Incyte Corporation, including development and commercialization of major oncology brands, organizational capability building, talent recruiting and development, and functional leadership.
- Our Chief Medical Officer and Head of Development, Mihail Obrocea, M.D., is a former practicing academic medical oncologist and experienced pharmaceutical physician executive that brings a successful cancer drug development track record from Juno Therapeutics Inc. (acquired by Celgene/BMS), Pharmacyclics Inc., AbbVie Bio Corp., Mannkind Corp., MedImmune, Inc. and Pfizer, Inc., among others. His experience includes clinical development of cell therapies (CAR-T), cancer vaccines, antibodies, and antibody drug conjugates (ADCs) and small molecules across a wide range of tumor types and clinical indications.
- Our Chief Scientific Officer, Sergei M. Gryaznov, is a Ph.D. who is an internationally recognized scientist and expert in the areas of modern drug discovery and development, oncology, telomerase, immune-regulatory therapeutics, nucleosides, nucleotides, DNA and RNA analogues, lipid and other conjugates, small molecules and nucleic acid based therapeutic agents. He is the co-inventor of a novel telomere-by-telomerase-targeting therapeutic approach to potential cancer treatment and responsible for leading the research team that characterized THIO's telomere targeting activity.
- Our Chief Financial Officer, Joseph F. McGuire has served as Chief Financial Officer for several privately held and publicly traded companies in the health care, financial services, investment, and manufacturing industries. In these roles, his responsibilities included SEC financial reporting, investor relations, corporate governance, legal and audit liaison, and team building. Most recently, Mr. McGuire was the chief financial officer at Avadim Health, Inc. ("Avadim"). Mr. McGuire began his career with Price Waterhouse, where he was a certified public accountant, and later held management positions with Dean Witter Reynolds and Paine Webber, Inc.

We have engaged the following advisors, who are leading, internationally recognized experts in oncology, telomeres and telomerase research, to be a part of our Scientific Advisory Board ("SAB"), which provides independent non-binding scientific advice to our management team in the roles detailed below under each member's name:

1. Tom Gajewski, M.D., Ph.D. – Professor of Cancer Immunotherapy (University of Chicago)

    - One of the key pioneers in cancer immunotherapies and accomplished in the field
    - Key investigator on all phase 2 and phase 3 trials in Melanoma (with Keytruda®, Opdivo®, etc.)
    - Immediate past president of the Society for Immunotherapy of Cancer (SITC)
    - Served on the program committees for the American Society for Clinical Oncology (ASCO) and the American Association for Cancer Research (AACR)
    - Serves as an editor for Cancer Research and Journal for Immunotherapy of Cancer
    - On our SAB, will cover translational research for all cancers, for clinical development

2. Tudor Ciuleanu, M.D., Ph.D. – Professor of Oncology (University of Medicine and Pharmacy, Cluj-Napoca, Romania)

- Top Key Opinion Leader (KOL) in NSCLC and CRC in Europe
- Key investigator in more than 90 phase 3 and phase 2 clinical trials, including most immune therapy agents
- One of the best published clinical investigators (appears in most references in the National Comprehensive Cancer Network (NCCN) guidelines)
- President of Romanian Federation of Cancer Societies
- Editor for the Journal of Clinical Oncology (JCO), Romanian edition
- On our SAB, will lead clinical activities in Europe across tumor types – NSCLC, CRC, Gastric, HCC, Head and Neck, Urological cancers, and Lymphomas

3. Jerry Shay, Ph.D. – Professor and Vice Chairman of the Department of Cell Biology (University of Texas Southwestern)

- One of the world leaders in the study of telomeres and telomerase
- Scientific co-founder of the research supporting our lead program THIO and an integral advisor to the program
- Highly influential biomedical researcher with over 30 issued patents and more than 500 peer reviewed publications
- Southland Financial Corporation Distinguished Chair in Geriatric Research and a Distinguish Professor at University of Texas Southwestern, having received the University of Texas Regent's Outstanding Teaching Award and the Minnie Steven Piper Foundation Professor Award
- Awarded the Eunice Kennedy Shriver NIH Alliance Pioneer Award in 2017
- On our SAB, Dr. Shay will provide scientific leadership as the THIO co-inventor and a worldwide recognized expert in the science of telomeres and telomerase in cancer. Dr. Shay serves as the Chairman of the SAB.

4. David Ashley, M.D., Ph.D. – Professor of Neuro-Oncology (Duke University)

- Top KOL in pediatric and adult neuro-oncology
- Expert in translational research and clinical development
- Expert in immuno-oncology, having developed and clinically tested dendritic cell vaccines and other immuno-therapeutics
- Principal investigator of a number of important national and international studies, both clinical and pre-clinical
- Former Director of two major cancer centers, The Royal Children's Hospital Melbourne and Andrew Love Cancer Centre – Barwon Health
- On our SAB, will assist in translational research in Brain Cancers for clinical development

5. Gunnur Dikmen, M.D., Ph.D. – Professor at Hacettepe University Medical Faculty, Department of Medical Biochemistry, as well as the director of the Hacettepe University hospital's emergency laboratory.

- Broad range of experimental and clinical experience in molecular & cell biology and clinical biochemistry, translating research results from bench to bedside and from academia to clinical laboratory to mentor the next generation of multidisciplinary research projects by providing new therapeutic approaches for cancer and telomere related diseases.
- Expert in the biology of telomeres and telomerase in the treatment of cancer.
- Under her capacity as Secretary-General of the Turkish Biochemical Society, organized various important national and international courses and congresses.
- On our SAB, will assist in preclinical and translational research, across tumor types.

6. Adam Yopp, M.D. – Occidental Chemical Chair of Cancer Research and an Associate Professor and Division Chief of Surgical Oncology and Colorectal Surgery, at Harold C. Simmons NCI-designated Comprehensive Cancer Center at UT Southwestern Medical Center in Dallas.

    - Completed a fellowship in surgical oncology at Memorial Sloan-Kettering Cancer Center focusing on upper GI and hepatopancreatobiliary malignancy and joined UT Southwestern in 2009.
    - Director of the Liver Tumor Program at UTSW and both his research and clinical interests are focused on the delivery of care in patients with primary liver cancer.
    - Much-recognized key opinion leader in liver cancer.
    - On our SAB, will assist with developing THIO for the treatment of liver cancer.

Our SAB is primarily compensated by way of the grant of stock options as determined by the Company as appropriate in recognition of the specific services or areas of expertise of each member.

We are also supported by a seasoned board of directors, whose members have significant entrepreneurial skills in company building and corporate financing as well as decades of collective leadership and board experience.

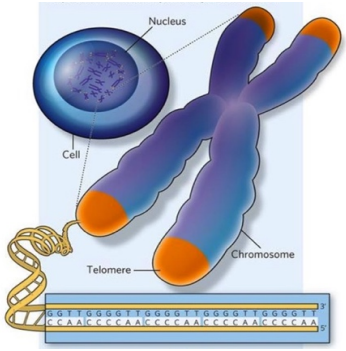
Our Programs

Telomere Targeting Program

Targeting Telomeres via Telomerase Leads to Cancer Cell Death

Telomeres are regions of repetitive nucleotide sequences that are associated with specialized proteins at the ends of linear chromosomes, that represent a critical key therapeutic target for cancer. Telomeres are often depicted in imagery like the end of a shoelace.

Maintenance of telomeres is essential for unlimited cellular proliferation and confers immortality in cancer cells. Telomeres in human cells consist of double-stranded and single-stranded repeats of the sequence TTAGGG, which terminate in a single-stranded 3´- extension overhang of the G-rich strand. Their major function is to cap and protect the ends of chromosomes and thus to provide genetic stability. This capping function is mediated by a special architecture in which the 3´- overhang participates with telomere-binding proteins in a large loop structure called T-loop. The image on the right reflects the general location of telomeres as the end-cap of the chromosomes, which are located in the nucleus of the cell.

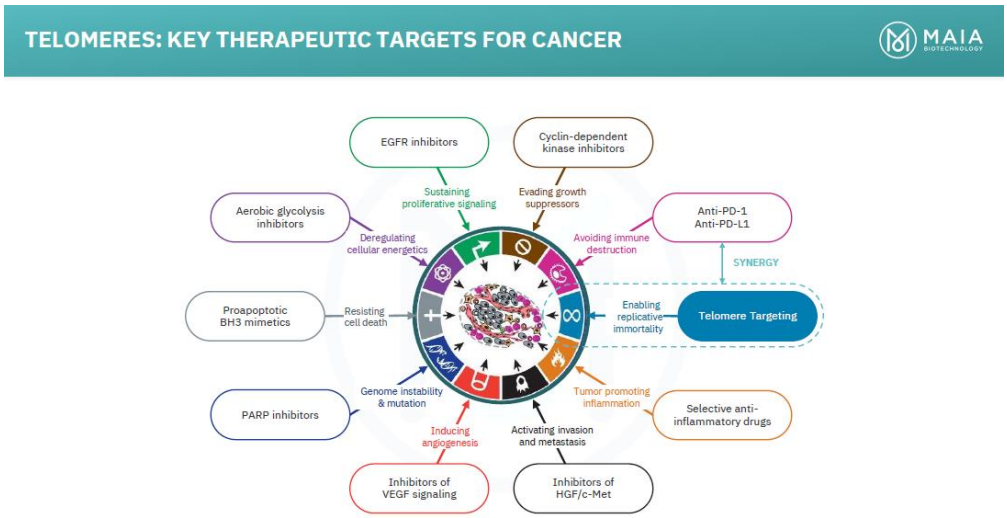


Adapted from *Transcendental Meditation and lifestyle modification increase telomerase*, December 6, 2015.

The most successful anti-cancer drugs in the market today typically interfere with only one of the specific capabilities or “hallmarks” cancer cells use for tumor growth and progression. In contrast, our lead drug candidate, THIO, targets two major hallmark pathways:

- Targeting cancer cell *telomeric* DNA structure and functional integrity; and
- Activating the immune system that turns immunologically “cold” tumors into “hot” tumors that are responsive to therapy. THIO synergizes with immune activating agents, like checkpoint inhibitors, for the potential to attack and destroy tumors.

The chart below reflects the many different methods by which successful anti-cancer drugs might prevent tumor growth and where THIO stands in relation to the other approaches.



Adapted from Cell 2011, Volume 144, Issue 5, Pages 646-674 (DOI:10.1016/j.cell.2011.02.013)

Role of the Enzyme Telomerase

Telomerase is a ribonucleoprotein enzyme (reverse transcriptase) that synthesizes telomere repeats from the beginning, or *de novo*. In human cells, the telomerase holoenzyme consists of a high-molecular-weight complex with a template region-containing RNA subunit, hTR, and a protein component, the catalytic subunit human telomerase reverse transcriptase (hTERT). In most normal somatic cells, telomerase activity is absent and telomere repeats are lost with cell division and with aging. Telomerase is especially important in fetal tissues, reproductive cells and other tissues where extensive cell proliferation is necessary. However, most adult normal tissues are telomerase silent. Telomere attrition, beyond a certain threshold, results in the uncapping of chromosome ends, which subsequently induces DNA damage and onset of replicative senescence. In contrast, about 73% to 100% of all cancer cells in most tumor types have detectable telomerase activity, which leads to the stabilization of telomeres and allows for unlimited growth potential along with disease progression. Successful targeting of telomerase positive (TERT+) cancers represents a significant potential for therapeutic utilization in almost all tumor types.

Since most cancer cells are reliant on telomerase for their survival, and telomerase is undetectable or only transiently present at low levels in normal cells, telomeres of cancer cells and telomerase are attractive targets for the development of new cancer therapeutics. “Proof of Principle” for validation of telomere structural integrity-targeting as a therapeutic concept was demonstrated *in vitro* in human tumor cells using dominant negative mutant forms of hTERT. In these experiments, telomerase activity was abolished, which was associated with continuous telomere shortening, subsequently leading to the cancer cells death. Research has also indicated that cancer cell specific anti-telomeres and anti-telomerase therapies may have fewer side effects than more traditional treatments, such as chemotherapy or radiotherapy. This has made anti-cancer therapies based on telomerase inhibition an area of interest in medicine. However, attempts to directly target telomerase in clinical trials have not yet produced an approved drug, as these efforts have encountered material limitations primarily due to increased toxicities that may result from the long lag period between initiation of anti-telomerase treatment and its therapeutic effects.

Differentiated Activity of THIO, a Telomere-Targeting Agent

THIO (6-thio-2'-deoxyguanosine or 6-thio-dG) is a small molecule telomere targeting agent that uses the enzyme telomerase for DNA integration predominantly in the telomeric structure. Based on pre-clinical studies, THIO's telomere targeting activity is believed to be primarily cancer-specific in tumor cells with active telomerase, but not in normal cells. Based on our extensive review of publicly-available information, to our knowledge THIO's direct telomere targeting action utilizing telomerase is different from other commercially available cancer therapies and those currently in publicly disclosed clinical trials. Telomeres, along with the enzyme telomerase, play a fundamental role in the survival of cancer cells and their resistance to current therapies. The statements above are not intended to give any indication that THIO has been proven effective or that it will receive regulatory approval.

In non-clinical studies, published initially in 2014 along with subsequent studies, THIO was found to be converted, in cells, into the substrate recognized by telomerase, and then incorporated into telomeres of the cancer cells. Once incorporated, THIO compromised the cancer cell's telomere structure and function, leading to "uncapping" of the telomeres, induction of DNA damage responses, and rapid cancer cell death. These profound structural modifications of cancer cell telomeres were irreparable. In both *in vitro* and *in vivo* studies, THIO showed a very prompt effect, causing telomere uncapping and leading to cancer cell death*, independent* of the initial tumor telomere length.

The above graphic represents an established method of action from previously conducted research in rodents that forms the scientific rationale for further clinical studies, but has not yet been tested in humans.

In 2019, further non-clinical research in syngeneic and humanized mouse models of telomerase-expressing cancers uncovered previously unknown telomere targeting activity of THIO specifically resulting from its breakdown of cancer cells. The THIO-containing DNA fragments, resulting from THIO telomere disruption, are packed into micronuclei and are released from the treated cancer cell into the blood stream, which enhances immune responses. An immune response was observed, attributed to stimulation of the cGAS/STING pathways in the host APCs (Dendritic Cells, pDCs), as well as activation of NK cells and CD 8+ and CD 4+ lymphocytes *in vivo*. At the same time as the T-cells activation, THIO treatment reduced levels of myeloid-derived suppressor cells (MDSCs) in the tumor micro-environment (TME), which is considered important for an anticancer immune response. While THIO activated CD8+ T cells, it also increased the total number of CD8+ T cells and upregulated PD-1 expression in the CD8+ T cells on per cell basis in the mouse model. This research demonstrated how the THIO-produced telomere stress may have the potential to increase innate sensing and adaptive anti-tumor immunity. In short, this immune system stimulation and TME remodeling proceeded in a specific antigen-dependent manner and induced adaptive immune responses that eradicated remaining cancer cells *in vivo*.

The above noted recent studies in a humanized mouse model also supported the hypothesis that sequential administration of THIO followed by an anti-PD-L1type of checkpoint inhibitor may overcome resistance to checkpoint blockade in advanced cancer models, suggesting that the combination therapy could benefit PD-L1-resistant patients.

Administration of low doses of THIO, aimed to activate the immune system via THIO-induced telomeric DNA modification, followed by checkpoint inhibitor therapy (anti-PD-L1 or anti-PD1), eliminated advanced tumors in preclinical models with confirmation of cancer cell type specific immune memory. This potential for THIO to induce immune memory, if confirmed in human clinical trials, would be a distinct feature of THIO's mechanism of action, offering the possibility that the immune system may continue to be active against the cancer cells over extended periods of time, potentially reducing the need for additional treatment.

These pre-clinical results provided the basis for our new clinical therapeutic strategy for sequentially administering THIO as a telomere-targeted agent first, to activate the immune system against the specific cancer, followed by immunotherapy or other immune-activating therapy.

Limitations of Other Therapeutic Approaches

In contrast to THIO, which targets telomeres, a challenge for the potential clinical application of pharmaceutically useful telomerase inhibitors (e.g., Imetelstat), is the therapeutic window (the range of dosage of a drug or of its concentration in a bodily system that provides safe effective therapy) and the often-observed delay between initiation of treatment and phenotypic response (called the "lag period"). Since the antiproliferative effect of any direct telomerase inhibitor is dependent on the telomere length of any given tumor cell, clinical response will be delayed until the telomeres become critically short, and thus can no longer protect the chromosomes, and as a result, the cancer cell dies. This requires a significant number of cell divisions to become apparent, and treatment may have to be given continuously for weeks to months, potentially in conjunction with other treatment modalities, to achieve an appropriate level of efficacy.

THIO: A Telomere Targeting Agent

Background

THIO (6-thio-2'-deoxyguanosine) is a synthetically-modified small molecule nucleoside that was originally designed to be an improved chemotherapy drug developed to work around purine analog resistance, which was standard-of-care therapy in the 1970s. Sponsored by the National Cancer Institute, THIO was extensively investigated in at least 19 clinical trials with over 600 cancer patient subjects (adult and pediatric) treated, both as monotherapy or in combination with other commonly used standard agents of the time. See "THIO Clinical Trials" below for more information about these trials. A traditional treatment strategy was used where patients were treated to maximum tolerated dose (MTD), a common approach for cancer therapy drug development. Although study results were promising, development was abandoned in favor of other therapies.

The previous human experience presents significant limitations as it dates to the 1970s and early 1980s when the implementation of ICH Good Clinical Practices was not yet in effect. The published studies did not disclose certain data points in line with the current ICH Good Clinical Practices, such as efficacy endpoints and serious adverse events, whether those endpoints were reached, whether the data was found to be statistically significant and serious adverse events. Further, we do not know whether those prior studies were powered for statistical significance in the way our planned studies will be powered, based generally on the results of these prior human studies, we believe that THIO has a well-established safety profile, which we intend to independently demonstrate through our own clinical studies. Moreover, all prior studies were conducted primarily in heavily pre-treated, refractory patients.

Further detailed analysis of the body of prior THIO research indicates researchers were not aware of three key factors, which if they had been known at the time, may have impacted the decision to cease development. These factors have only been discovered since 2014 (with the most recent in 2019), as illustrated in the following graphic:

1. THIO's detailed telomere targeting mechanism and resulting immune activation.
2. At high drug exposure (MTD), THIO can be immunosuppressive.

3. Proper administration of THIO to activate the immune system followed by immunotherapy to achieve best response.

Telomeres are vital DNA-structures discovered by Jack Szostak's laboratory, for which he received the Nobel Prize in 2009, which are present at the ends of each chromosome which protect the genome from degradation, unnecessary recombination, repair, and interchromosomal fusion. Telomeres, along with the enzyme telomerase, are both crucial for the survival of cancer cells. Telomerase was discovered by Elizabeth Blackburn and Carol Greider, who shared the Nobel Prize with Jack Szostak in 2009.

THIO is believed to selectively target telomerase positive (TERT+) cancer cells, where the enzyme is activated, versus normal cells. 73% to 100% of primary human cancers are TERT+ dependent upon tumor type, indicating a significant potential therapeutic utilization for THIO in almost all tumor types. THIO's cancer-specific disturbance of telomeric structure by telomerase leads to disruption in the cell cycle, followed by rapid cell death. Based on extensive review of publicly-available information, THIO's direct telomere targeting action utilizing telomerase is different from other commercially available cancer therapies and those currently in publicly disclosed clinical trials.

In 2019, the MAIA research team showed that in mouse models THIO-produced telomere modification and disruption induced cancer-specific innate and adaptive immune response against immunologically "cold" or unresponsive tumor types. When THIO was administered at low doses, in syngeneic and humanized mouse models of telomerase-expressing cancers, followed by a break to allow for the activation of the immune system against the specific cancer, then followed by a standard-of-care immunotherapy agent like a check point inhibitor (CPI), either PD-1 or PD-L1, complete tumor regression was observed, with no observed toxicities. These effects have been replicated in multiple preclinical models, utilizing all leading checkpoint inhibitors or radiation therapy.

Based on these studies, we hypothesized that THIO, administered in advance of immune-activating therapies (e.g., checkpoint inhibitors, radiation therapy, etc.), at dose levels significantly lower than the levels evaluated in previous clinical trials, will "*prime"* the tumor environment and initiate an overall anti-tumor immune response. This represents an entirely new therapeutic approach for THIO and forms the basis for the new clinical strategy for planned future trials.

THIO Preclinical Development

The following summarizes the relevant preclinical studies. Extensive preclinical studies have been performed to validate THIO's primary mechanism of action: targeting telomeres directly and causing cancer cell death via telomerase-mediated DNA damage.

To our knowledge, THIO alone has shown significant telomere targeting activity in numerous non-small cell lung cancer (NSCLC) and multiple other cancer-based cell lines *in vitro* and *in vivo*, including but not limited to small cell lung cancer (SCLC), melanoma, colorectal cancer (CRC), glioblastoma multiforme (GBM), diffuse intrinsic pontine glioma (DIPG), neuroblastoma, pancreatic, hepatocellular carcinoma (HCC), as well as head and neck cancer, breast cancer and prostate cancer.

In vitro: in summary, EC_{50} values (the concentrations at which half of the total number of cancer cells are dead) were approximately 0.4 μM to 1.5 μM. THIO was not cytotoxic in normal, untransformed telomerase-negative cells at concentrations up to 100 μM.

In vivo: in summary, the doses that resulted in cancer cell death were in the range of 2.5 - 5.0 mg/kg, depending on the tumor type and the schedule of the drug administration ranging from 1 to 3 days per cycle.

THIO in Sequential Administration in Advance of Checkpoint Inhibitors (CPIS) Therapy

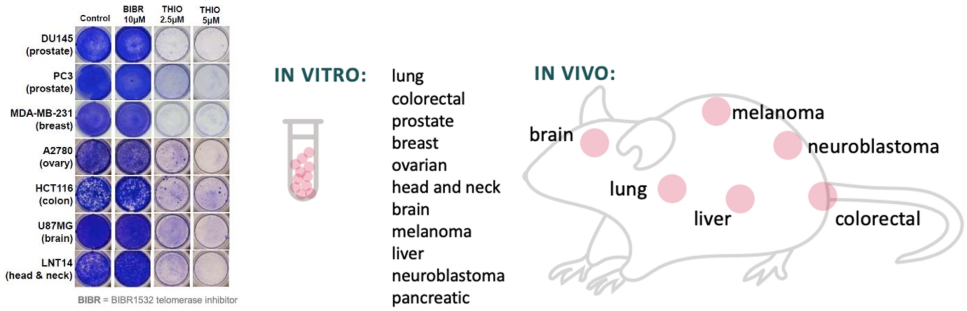
In vivo, THIO, at 3 mg/kg/dose, (which corresponds to a 20 mg/patient/day low-dose), administered followed by a one-day break, followed by an immune checkpoint inhibitor (either anti-programmed cell death protein 1 (PD-1) or anti-programmed death ligand 1 (PD-L1) products), resulted in complete tumor regression in NSCLC and CRC syngeneic mouse tumor models.

At this low dose, THIO was able to transform immunologically "cold' tumors, (tumors that do not respond to the CPI treatment), into immunologically "hot" tumors, which then responded well to the following sequential treatment with a CPI. These potent anti-tumor phenotypic effects were also accompanied by the efficient induction of the tumor-specific CD8+ cells, as well as CD4+, and natural killer (NK)-cells (Mender, 2020b).

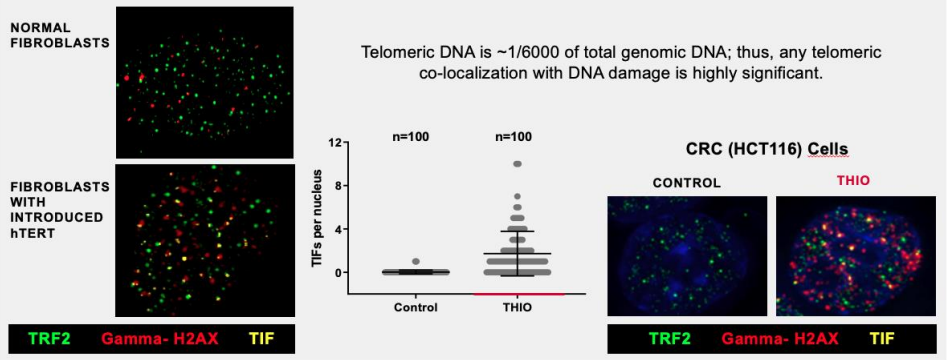
These responses were achieved through telomerase-dependent and cancer cell specific activation of a) DNA damage responses, and b) cGAS/STING pathways by THIO. This body of research represents the basis for the new immune-activation treatment strategy

The following represents key highlights from THIO preclinical research:

- THIO has been tested in multiple preclinical studies evaluating various tumor types *in vitro* including in lung, colorectal, prostate, breast, ovarian, head and neck, brain, melanoma, and liver cancer. THIO has also been tested in *in vivo* mouse models of lung, colorectal, brain, melanoma, liver and brain cancers. In the below graphic, the left panel depicts cancer cell colony formation *in vitro* assay results conducted with various types of telomerase positive cancers, namely prostate, breast, ovarian, colon, brain, head and neck. In the control column, cancer cells grew. In the second column, with the telomerase inhibitor BIBR, the cancer cells also grew. In the third column, in which the telomere targeting agent THIO was administered at a concentration of 2.5µM, cancer cell growth was visibly inhibited. In the fourth column, in which THIO was administered at a concentration of 5µM, cancer cells were also visibly inhibited. The same concentrations of THIO were also administered *in vivo* in rodent models (mice), caring tumors, derived from either brain, or liver, or melanoma, or neuroblastoma, or colorectal cancer cells were treated with THIO (at 2 mg/kg to 5 mg/kg doses), significant reduction in tumor masses resulting from the treatment with THIO was observed. Note that THIO's activity seen in preclinical models has yet to be demonstrated in humans.



- THIO demonstrated potential to *selectively* cause cancer cell death with active enzyme telomerase versus normal cells *in vitro*. The below graphic illustrates formation of telomeric damage foci (TIFs) in telomerase activity-positive cancer cells, but not in normal non-cancerous cells, resulting from application of THIO. These data indicate molecular mechanism of THIO that targets telomeric DNA of cancer cells through their telomerase enzymatic activity. At the same time, normal cells, that are devoid of telomerase activity, are not affected by THIO.



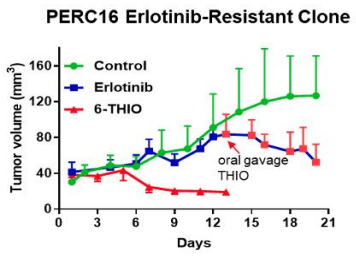
Mender I. et al., Cancer Discovery (2015)

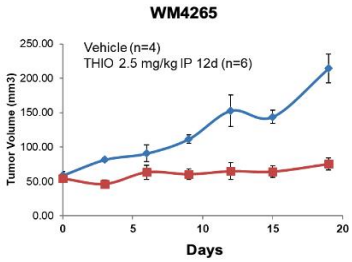
*TIF – telomere damages induced foci
*TRF2 – protein associated with telomeres
* Gamma-H2AX – protein associated with induction of DNA damage
*CRC – colorectal cancer
*hTERT – protein components of telomerase enzyme

- THIO, as a single agent, showed *in vitro* telomere targeting activity in cancer cells that are resistant to tyrosine kinase inhibitors (TKIs), checkpoint inhibitors, IL-2, IFNα, YERVOY® (ipilimumab) and a host of chemotherapies. The below graphic, in NSCLC and Melanoma models respectively, demonstrates in vivo telomere targeting activity of THIO in mice models of lung cancer, derived from PERC16 cells, and melanoma derived from WM4265 cells. Both cell lines are resistant to multiple standard-of-care drug compounds, as listed in the Figure legends.

- **PERC16** human lung cancer cells (TKI-resistant)
- 5 mg/kg THIO once-daily i.p. injection
- 15 mg/kg erlotinib once-daily oral gavage

- **WM4265:** Derived from a melanoma patient resistant to cisplatin, vinblastine, temozolomide, IL-2, IFN-α, ipilimumab and pembrolizumab (Checkpoint Inhibitors)

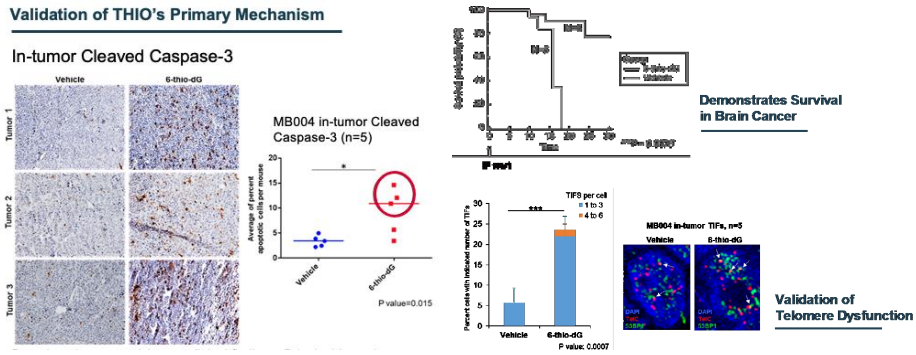




*i.p. – intraperitoneal injection
*IL-2 – cytokine interleukin 2

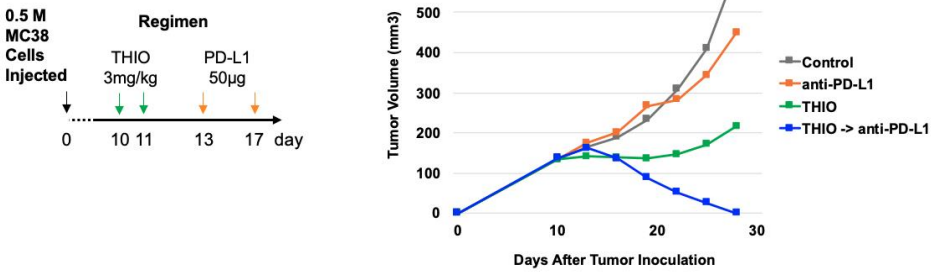
*IFN-a – interferon alfa

- THIO was observed to penetrate the blood-brain barrier and inhibits tumor growth, inducing in-tumor telomere dysfunction and cancer cell death, in *in vitro* models of difficult to treat pediatric brain cancer, where no therapy exists. In the below graphic, this is shown through presence of Caspase-3 enzyme which is associated with cell death. Sengupta, S. et al. Induced telomere damage to treat telomerase expressing therapy-resistant pediatric brain tumors. Mol Cancer Therapeutics, 17(7): 1504-1514, 2018.



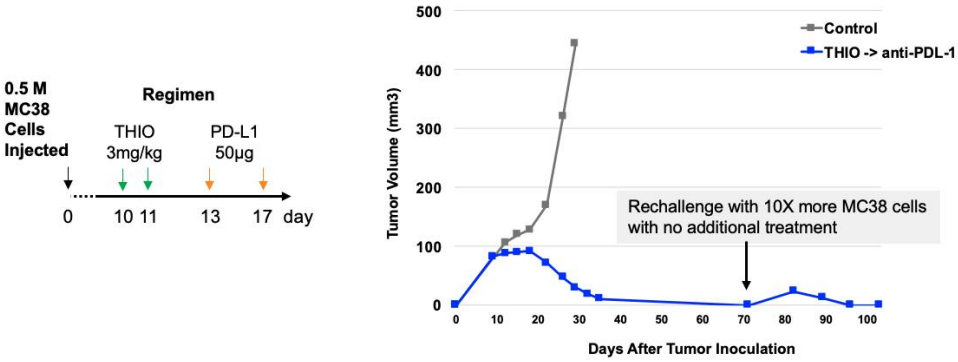
*TIF – telomere damage induced foci
*MB004 – brain cancer cell line

- THIO transformed "cold" tumors into "hot" tumors that were responsive to immunotherapy. THIO utilized a telomere targeting pathway that synergized with checkpoint inhibitors and other immune-activating therapies. The tumor-specific immune activation, resulting from THIO's primary mode of action, overcame resistance to current check point inhibitor (CPI) standard-of-care therapy, as illustrated in the following Colorectal Cancer model. The below graphic demonstrates telomere targeting activity of THIO alone, and in sequential combination with immune checkpoint inhibitor (anti-PD-L1 compound, atezolizumab), in mice model of colorectal cancer, derived from MC-38 cells. Two doses of THIO are shown to control tumor growth while anti-PD-L1 agent. Sequential administration of THIO (2 days), followed by administration of the anti-PD-L1 agent, demonstrates disappearance of tumor cells.



- Immunological memory was observed in mouse models, where the immune system continued to be active against the specific treated tumor cell type for 100 days post-tumor inoculation. The below graphic demonstrates that the tumor-free animals that were treated with the sequential combination of THIO and anti-PD-L1 compound were followed for 70 days, with no observed tumor recurrence. Subsequently,

animals were re-challenged with 10 times more MC38 cancer cells. Cancer growth was not observed in these animals, demonstrating induction of anti-tumor-protecting memory after sequential administration of THIO and anti-PD-L1 agent; ref: Mender, I., et al. Telomere stress potentiates STING-dependent anti-tumor immunity. Cancer Cell, 38,3, 400-411.E6, September 14, 2020.



Moreover, due to the cGAS/STING activation caused by THIO, telomere targeting activity was observed in numerous preclinical tumor models when THIO was administered followed by immune activating therapy such as immune checkpoint inhibitors (anti-PD-L1 or anti-PD-1 antibody).

It is therefore hypothesized that THIO, administered in advance of immune-activating therapies (e.g., checkpoint inhibitors, radiation therapy, etc.), at dose levels significantly lower than the levels evaluated in previous clinical trials, will "*prime"* the tumor environment and initiate an overall anti-tumor immune response. If confirmed through additional clinical studies, this could represent an entirely new therapeutic approach for THIO and form the basis for the new clinical strategy for planned future trials.

THIO Clinical Trials

We plan to rely solely upon our self-generated clinical safety and efficacy data, if favorable, in support of our anticipated NDA filing for THIO. However, THIO, as a compound, was the subject of investigation in numerous clinical trials in the 1970s to the early-80s in a variety of solid tumors and hematological malignancies. The compound was evaluated in at least nineteen (19) Phase 1 to Phase 3 clinical trials with over 600 patients treated by major cancer institutions and cancer cooperative groups. THIO was studied in combination with common agents in use at the time, including methyl-CCNU or mitomycin, two widely used alkylating agents to treat a variety of cancers and leukemias. Studies utilizing THIO as a single agent have been published in peer-reviewed journals. As part of the existing data base of clinical experience with the drug, we expect to reference the older NCI studies in the public domain as well as reference NCI's original IND filing in support of an IND filing, pursuant to FDA regulations.

The following tables summarize the THIO single agent peer-reviewed published data available from the previous clinical trials.

Phase 1

Study	Tumor Type	Regimen/Dose Schedule	Evaluable Subjects	Description of Observed Adverse Events	Responses
C76-92	Pediatric Acute Leukemia who received prior 6-mercaptopurine (6-MP) or 6-thioguanine	THIO 200 to 2,250 mg/m2 given every 12 hours for 3 doses every 2 weeks Maximum tolerated dose (MTD) was determined to be 1,750 mg/m2 given every 12 hours for 3 doses every 2 weeks	31	Reversible urate nephropathy, elevations of liver enzymes, nausea and vomiting, alopecia, and skin reactions	Therapeutic Responses observed in 6/23 (26%) patients comprised of 2 complete responses and 4 partial responses

Source: Higgins, G. R., Jamin, D. C., Shore, N. A., Momparler, R., Hartman, G. and Siegel, S. E. (1985). "Phase I evaluation of beta-2'-deoxythioguanosine in pediatric patients with leukemia." Cancer Treat Rep 69(6): 699-701t

Phase 2 – Single Agent Studies

Protocol	Tumor Type	Regimen/Dose Schedule	Evaluable Subjects	ORR (Overall Response)	PR (Partial Response)	CR (Complete Response)	Observed Adverse Events
	Total Patients		**117**	**27 (23%)**	**11 (9%)**	**16 (14%)**	
SEG-248	Acute Myelocytic Leukemia (AML)	300 mg/m2 daily for 5 days	17	4 (24%)	1 (6%)	3 (18%)	Leukopenia Thrombocytopenia Skin rash Alopecia (reversible) Nausea and vomiting
		400 mg/m2 daily for 5 days	49	10 (20%)	6 (12%)	4 (8%)	
	Blastic transformation of chronic myelogenous leukemai (BTL)	300 mg/m2 daily for 5 days	11	3 (27%)	-	3 (27%)	
		400 mg/m2 daily for 5 days	26	6 (23%)	3 (12%)	3 (12%)	
	Acute Lymphocytic Leukemia (ALL)	300 mg/m2 daily for 5 days	4	2 (50%)	-	2 (50%)	
		400 mg/m2 daily for 5 days	10	2 (20%)	1 (10%)	1 (10%)	
EST 4273 (ECOG)	Colorectal (prior 5-FU chemotherapy)	THIO 100 mg/m2 daily for 5 days every 3 weeks vs MeCCNU 175 mg/m2 every 8 weeks	61	3 (5%)	3 (5%)	-	Leukopenia, thrombocytopenia, nausea and vomiting
			55	5 (9%)	5 (9%)	-	

Omura, G. A., Vogler, W. R., Smalley, R. V., Maldonado, N., Broun, G. O., Knospe, W. H., et al. (1977b). "Phase II Study of beta-2'-deoxythioguanosine in adult acute leukemia. (Study SEG-248)" Cancer Treat Rep 61(7): 1379-1381 Douglass, H. O., Jr., Lavin, P. T., Woll, J., Conroy, J. F. and Carbone, P. (1978). "Chemotherapy of advanced measurable colon and rectal carcinoma with oral 5-fluorouracil, alone or in combination with cyclophosphamide or 6-thioguanine, with intravenous 5-fluorouracil or beta-2'-deoxythioguanosine or with oral 3(4-methyl-cyclohexyl)-1(2-chlorethyl)-1-nitrosourea: A Phase II-III study of the Eastern Cooperative Oncology Group (EST 4273)." Cancer 42(6): 2538-2545

The previous human experience presents significant limitations as it dates to the 1970s and early 1980s when the implementation of ICH Good Clinical Practices was not yet in effect. The published studies did not disclose certain data points in line with the current ICH Good Clinical Practices, such as efficacy endpoints and serious adverse events. , whether those endpoints were reached, whether the data was found to be statistically significant and serious adverse events. Further, we do not know whether those prior studies were powered for statistical significance in the way our planned studies will be powered. Based generally on the results of these prior human studies, we believe

that THIO has a well-established safety profile, which we intend to independently demonstrate through our own clinical studies. Moreover, all prior studies were conducted primarily in heavily pre-treated, refractory patients.

Notwithstanding these limitations, the available data provides substantial information on the clinical experience with and clinical profile of THIO with an exposure exceeding 600 subjects (adult and pediatric) at doses significantly higher than those intended for investigation in the current program and new treatment strategy. All studies were conducted in heavily pre-treated/refractory patients, most of whom were pre-treated with other standards of care including chemotherapy.

To date, THIO has not received marketing approval in any country; therefore, there is no marketing experience to be reported.

The planned clinical trials will evaluate the new THIO immunogenic therapeutic strategy - evaluating the safety and efficacy of low potentially immunogenic doses of THIO administered to activate the immune system against the tumor to be treated, then followed by standard-of-care immunotherapy (checkpoint inhibitor) or other immune activating therapy (radiation therapy).

THIO Developmental Initiatives and Objectives

Based on the existing data regarding pre-clinical information on THIO, we believe it is possible to enter the next human clinical study in the near term with the new low dose immunogenic approach with THIO. We plan to approach the FDA to request a modified toxicity requirement to allow us a reduced time and expenditure to IND in the United States, however, the FDA may not grant such request. We are currently working with experts to evaluate the extent and quality of the existing data supporting THIO and expect to request a pre-IND meeting with the FDA for guidance in 2022.

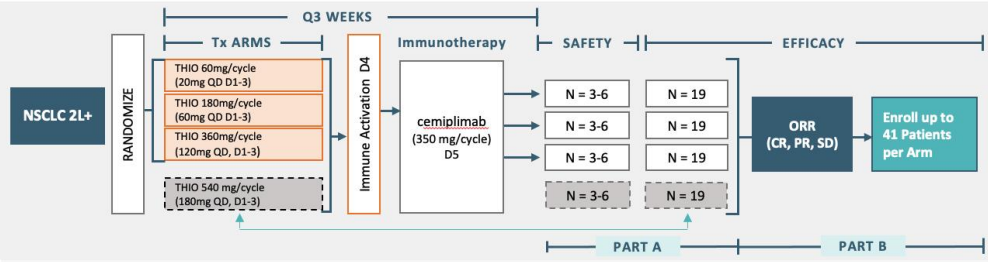
Phase 2 and 3 Programs

Our primary short-term objective is to assess this approach in a Proof-of-Concept study outlined below.

This first study will be a dose-finding, Phase 2 clinical trial evaluating both safety and efficacy of THIO sequenced with cemiplimab in patients with advanced non-small lung cancer (NSCLC) who progressed or showed no clinical benefit to first line treatment containing an immune checkpoint inhibitor. This trial, designated as THIO-101 study will be our first human clinical trial to test the immune system activation demonstrated in preclinical animal models: lower doses of THIO administered prior to a checkpoint inhibitor treatment reverses drug resistance, enhance and prolong immune responses in patients with advanced lung cancer who did not respond or progressed after a prior cancer treatment which contained an immune checkpoint inhibitor.

The trial design has two primary objectives: (1) safety of THIO administered as a priming immune system agent prior to cemiplimab administration and (2) clinical efficacy of THIO using Overall Response Rate (ORR) as the primary clinical endpoint. We expect the study to start initially in Australia and Europe followed by the United States.

The following chart sets forth the design of the THIO-101 trial:



This “dose-finding” trial will assess the safety, mechanism of activity, and immune system activation of four THIO doses tested out in separate arms administered in parallel. Each dosing arm will be further evaluated for efficacy based on Overall Response Rate (ORR), Duration of Response (DoR) and Progression Free Survival (PFS) to determine to optimal (safe and effective) dose of THIO administered in sequence with cemiplimab. Additional patients may be recruited for further clinical evaluation in any of the THIO arms based on safety and clinical benefit. Each arm of the trial will enroll a minimum of 22 and up to 41 evaluable patients. Subsequently, we expect to target earlier lines of therapy (1st line) in pivotal Phase 3 confirmatory studies in NSCLC.

In order to obtain FDA and EMEA approval of THIO in combination with other standard of care approved cancer immunotherapies, we will have to conduct head-to-head studies which will compare standard of care treatment alone to standard of care treatment combined with THIO. In such studies, we would have to show that THIO added to standard of care therapies adds a significant treatment benefit by slowing down tumor progression and increasing the overall survival of the cancer patients.

In addition, we are actively evaluating other regulatory strategies and pathways that have the potential to accelerate and/or expand the study of THIO administered in sequence with an immune-checkpoint inhibitor in colorectal cancer (CRC) indication.

In the event THIO demonstrates early clinical efficacy, we plan to expand our clinical development program in multiple tumor types and assess several regulatory approval pathways utilizing our other development programs. The clinical development plan includes the initiation of an additional “basket trial” in multiple cancer types. This study uses a special design which allows different cancer indications to be studied under the same single trial umbrella. Some of the indications considered are:

- hepatocellular carcinomas (HCC)
- small-cell lung cancer (SCLC)
- melanoma
- breast cancer
- pancreatic cancer
- glioblastoma multiforme (GBM)
- ovarian cancer
- prostate cancer

Ultimately, we envision positioning THIO as the foundational priming treatment for all immune-activating agents over time based upon THIO’s tumor-specific immune-activation approach that enables key clinical strategies that could dramatically expand the immunotherapy market.

Second Generation Telomere Targeting Agents

We have initiated an early-stage research and discovery program aimed at identifying new compounds capable of acting through the same mechanism of action as THIO, such as targeting and modifying telomeric structures of cancer cells through cancer-cell intrinsic telomerase activity. The main objective for this program is to discover compositionally new compounds with potentially improved specificity towards cancer cells relative to normal cells, and to assess telomere targeting activity in comparison with THIO. This program may also allow us to strengthen our patent portfolio. Although the program is in early stages and we may not be able to identify suitable compounds, we believe we will be able to create or discover a second generation of THIO-like compounds.

Strategic Collaborations and Key Agreements

Through our licensing agreements with The University of Texas Southwestern Medical Center (“UTSW”), we have commercial rights to certain U.S. patents, as well as their foreign counterparts, for the use of THIO in treating telomerase-expressing lung and colon cancer cells. We are currently using this technology to study a treatment regimen comprising the use of THIO treatment followed by cemiplimab (Regeneron) treatment in NSCLC. In addition, we have licensed a number of pending U.S. and foreign patent applications from UTSW directed to other indications, and we are continuing to pursue discussions with several companies to develop other treatment regimens using THIO for additional cancer indications.

Clinical Supply Agreement with Regeneron Pharmaceuticals, Inc.

In 2021, we entered into a Clinical Supply Agreement with Regeneron Pharmaceuticals, Inc. (REGN) to supply cemiplimab for the THIO-101 study. Regeneron will contribute the drug supply without cost, which represents a significant direct cost savings for our program. In exchange, Regeneron will receive development exclusivity for NSCLC indication during the study period, which means that MAIA cannot study THIO in NSCLC with any other PD-1 antagonist (a product sub-class of immune checkpoint inhibitors). All other tumor types remain open, and we are in discussions with other pharmaceutical companies to evaluate additional agreements that may be appropriate to support the expanded development of THIO. The supply agreement will remain in force until all of the obligations of the parties' related to the studies contemplated by the agreement are completed, or until terminated by either party. The agreement may be terminated in the event of unsafe use of cemiplimab, material breach, regulatory action or corruption.

In addition, our management believes that strong partnership interest will develop from other pharmaceutical companies who have checkpoint inhibitor franchises or those with cancer immunotherapy interest. We expect to continue discussions with several companies that have expressed interest and plan to expand discussions to capitalize on these opportunities. The checkpoint inhibitor market is large, and our goal is to ultimately position THIO as the foundational priming treatment to be used prior to all checkpoint inhibitors.

The University of Texas Southwestern Medical Center License Agreement 1

On December 8, 2020, we entered into an amended and restated agreement (of our prior November 29, 2018 agreement) with The Board of Regents of The University of Texas System on behalf of The University of Texas Southwestern Medical Center (collectively, UTSW). Pursuant to the amended and restated agreement, which we refer to as the UTSW1 Agreement, we obtained (1) an exclusive, worldwide license to develop and commercialize the following UTSW patent families generally directed to methods of using THIO (below) and (2) a non-exclusive worldwide license to develop and commercialize related technology rights.

Title / PCT Application Number
Telomerase Mediated Telomere Altering Compounds / PCT/US2014/33330 (WO2014/168947)
6-Thio-2'-Deoxyguanosine (6-Thio-Dg) Results in Telomerase Dependent Telomere Dysfunction and Cell Death in Various Models of Therapy-Resistant Cancer Cells / PCT/US2017/34706 (WO2017/205756)
Use of 6-thio-dG to Treat Therapy-Resistant Telomerase positive Pediatric Brain Tumors / PCT/US2019/023596 (WO2019/183482)
Treatment of Drug Resistant Proliferative Diseases with Telomerase Mediated Telomere Altering Compounds / PCT/US2017/023858 (WO/2017/165675)

Under the UTSW1 Agreement, we agreed to pay UTSW a minimal license fee, deferred license fees, milestone fees, and running royalties beginning on the first net sale (among others). For additional details regarding our relationship with UTSW, see the section entitled "Business — Intellectual Property —License Agreement 1 with *The Board of Regents of The University of Texas System*/*The University of Texas Southwestern Medical Center*." The UTSW1 Agreement includes an exclusive license to US patent no. 10,463,685 (expires April 8, 2034), and pending US patent application nos. 16/450,430 (having an earliest expiration of March 23, 2037, if a patent is granted), 16/304,538 (having an earliest expiration of May 26, 2037, if a patent is granted), and 16/982,979 (having an earliest expiration of March 22, 2039, if a patent is granted).

The University of Texas Southwestern Medical Center License Agreement 2

On December 23, 2020, we entered into a second agreement with The Board of Regents of The University of Texas System on behalf of The University of Texas Southwestern Medical Center, which set forth the agreement between the parties pursuant to the Company exercising its option rights in the UTSW1 Agreement and obtaining additional license rights. Pursuant this second license with UTSW, which we refer to as the UTSW2 Agreement, we obtained

(1) an exclusive, worldwide license to develop and commercialize the following UTSW patent family (below) and (2) a non-exclusive worldwide license to develop and commercialize related technology rights.

Title / PCT Application Number
Sequential Treatment of Cancers Using 6-Thio-dG and Checkpoint Inhibitors / PCT/US2021/022090

Under the UTSW2 Agreement, we agreed to pay UTSW a minimal license fee, deferred license fees, milestone fees, and running royalties beginning on the first net sale (among others). For additional details regarding our relationship with UTSW, see the section entitled "Business — Intellectual Property —License Agreement 2 with *The Board of Regents of The University of Texas System /The University of Texas Southwestern Medical Center*." The UTSW2 Agreement includes an exclusive license to pending US patent application no. 17/200,539 (having an earliest expiration of March 12, 2041, if a patent is granted).

THIO Program

License Agreement 1 with The Board of Regents of The University of Texas System /The University of Texas Southwestern Medical Center

On December 8, 2020 (the "Effective Date"), we entered into an amended and restated agreement (of our prior November 29, 2018 agreement) with The Board of Regents of The University of Texas System on behalf of The University of Texas Southwestern Medical Center, (collectively, UTSW) to develop and commercialize certain UTSW owned and/or controlled patents and related technology directed to methods of using THIO ("the UTSW1 Agreement"). The license is exclusive as to worldwide Patent Rights for all uses in the Field, which is defined as all therapeutic, prophylactic and diagnostic fields of use for all indications, including discovery and development uses. The license is sublicensable with prior UTSW written approval consistent with the terms of UTSW1 Agreement.

The UTSW1 Agreement includes an exclusive license to the "Patent Rights" of the worldwide patent families including all provisional applications and any divisionals, continuations, continuations-in-part and foreign counterpart applications that are entitled to claim priority thereto, and any patents resulting therefrom, of the following:

Title / PCT Application Number
Telomerase Mediated Telomere Altering Compounds / PCT/US2014/33330 (WO2014/168947)
6-Thio-2'-Deoxyguanosine (6-Thio-Dg) Results in Telomerase Dependent Telomere Dysfunction and Cell Death in Various Models of Therapy-Resistant Cancer Cells /PCT/US2017/34706 (WO2017/205756)
Use of 6-thio-dG to Treat Therapy-Resistant Telomerase positive Pediatric Brain Tumors /PCT/US2019/023596 (WO2019/183482)
Treatment of Drug Resistant Proliferative Diseases with Telomerase Mediated Telomere Altering Compounds / PCT/US2017/023858 (WO/2017/165675)

The UTSW1 Agreement also grants the Company a non-exclusive worldwide license under the Technology Rights to develop, manufacture, have manufactured, distribute, have distributed, use, offer for Sale, Sell, lease, loan and/or import Licensed Products in the Field, wherein Technology Rights means Licensor's rights in technical information, know-how, processes, procedures, compositions, devices, methods, formulas, protocols, techniques, designs, drawings or data created before the Effective Date by Inventors at UTSW which are necessary or reasonably useful for practicing Patent Rights.

The UTSW1 Agreement also grants the Company the first right to negotiate an exclusive license under any patent rights covering or claiming any improvement, which is any patentable invention and is conceived or reduced to practice solely by Dr. Jerry Shay or those under his direct supervision at UTSW within 3 years of the Effective Date, under certain conditions.

The term of the UTSW1 Agreement begins on the Effective Date and continue until the earliest of: (i) termination pursuant to the UTSW1 Agreement, (ii) the last date of expiration or termination of the Patent Rights; or (iii) if Technology Rights are licensed and no Patent Rights are applicable, twenty (20) years after the Effective Date. The Company may terminate the UTSW1 Agreement for convenience, at any time prior by providing ninety (90) days' written notice to UTSW. UTSW may terminate the UTSW1 Agreement if the Company (i) becomes in arrears in any payments due, and fails to make the required payment within 30 days after delivery of written notice from UTSW, (ii) is in breach of any material non-payment provision, and does not cure such breach within 60 days after delivery of written notice, (iii) UTSW delivers notice to the Company of three or more actual breaches in any 12-month period, even in the event that the Company cures such breaches in the allowed period, (iv) becomes insolvent or bankrupt, then termination is immediate.

UTSW and/or the co-owners of certain patents have reserved the right to publish the scientific findings related to the Patent Rights and use and to permit other academic institutions to use the licensed subject matter for teaching, research, education, and other education-related, non-commercial purposes. The Patent Rights are also subject to any rights of the United States federal, state and/or local Government(s), as well as nonprofit entities, if certain patents or technologies were created in the course of Government-funded or non-profit entity-funded research.

Pursuant to the UTSW1 Agreement, the Company paid to UTSW a nominal one-time upfront license fee. The Company is also obligated to pay all accrued patent expenses as well as ongoing patent expenses on a scheduled basis tied to Company fund-raising through Series A funding until Company has reimbursed all patent expenses. In the event that the Company assigns the agreement to a third party, the Company is obligated to pay UTSW an assignment fee in the mid-six figures within 15 days of such assignment. The agreement cannot be assigned without UTSW's consent.

Under the UTSW1 Agreement, the Company is obligated to use diligent efforts to bring licensed products to market through a funded, ongoing and active research and development, manufacturing, regulatory, marketing or sales program (all as commercially reasonable) and provide semi-annual reports to UTSW on its progress. The Company is also obligated to pay agreed upon milestone payments to UTSW. Failure of the Company to fulfill these obligations may be treated as a material breach by UTSW.

The only milestones that require payments under the UTSW1 Agreement include: (i) first commercial sale in the U.S. of licensed product for treating an oncology indications ; (ii) first commercial sale in the U.S. of licensed product for treating a non-oncology indications; (iii) first time aggregate Net Sales (as defined in the UTSW1 Agreement) of licensed product for treating an oncology indications exceeds low-nine figure sales in a contract year; (iv) first time aggregate Net Sales of licensed product for treating a non-oncology indications exceeds low nine-figure sales in a contract year; (v) first time aggregate Net Sales of licensed product for treating an oncology indications exceeds low ten-figure sales in a contract year; (vi) first time aggregate Net Sales of licensed product for treating a non-oncology indications exceeds low ten-figure sales in a contract year. There are no milestone payments required on any development or regulatory milestones. The only required milestone payments under the UTSW1 Agreement related to commercial sales milestones, and the aggregate amount of milestone fees payable pursuant to the UTSW1 Agreement will not exceed $112 million.

The Company will also pay UTSW running royalties on a yearly basis as a percentage of Net Sales of the Company or its sublicensee. There are single digit royalty rates for licensed products and licensed services covered by a Valid Claim (as defined in UTSW1 Agreement) and dependent on whether Net Sales are greater than or less than/equal to low ten figures of sales, with Net Sales above that amount commanding a slightly higher percentage. In each case, the royalty percentage is lower before patent issuance in each jurisdiction. In the event that the licensed product or licensed service is not covered by a Valid Claim, the running royalty rates are reduced by a certain percentage. The royalty obligations continue on a country-by-country basis until the later of expiration of the last Valid Claim in each country or ten (10) years after the First Commercial Sale (as defined in UTSW1 Agreement) in each country. In the event that the Company or its sublicensee challenges the Patent Rights, then the Company will be obligated to

pay multiples of the applicable royalty rate of the Net Sales and, should the outcome of such challenge determine that any claim of the Patent Rights challenged is both valid and infringed then the Company will pay royalties at the rate of multiples of the applicable royalty rate of the Net Sales sold thereafter and reimburse UTSW for all fees and costs associated with defending such challenge, including attorney's fees and expert fees.

The UTSW1 Agreement also contains an anti-stacking provision pursuant to which in the event the Company or its sublicensee pays royalties or other payments to a third party who owns or controls intellectual property deemed necessary to develop, manufacture, have manufactured, distribute, have distributed, use, lease, loan, import, offer for sale and/or sell any licensed products and licensed services, the Company may reduce payments to UTSW by a certain percentage of the royalty, milestone or other payments paid to such third party. However, such adjustment in royalty payments to UTSW may not be reduced by more than a certain percentage of the royalty obligation in any contract year. In the event that the payment to the third party who owns or controls intellectual property deemed necessary to extend or expand the franchise or exclusivity of a previously launched licensed product (e.g., such as a new formulation as a second generation product containing the same compound as the previously launched Licensed Product), then the Company may reduce payments to UTSW by a certain percentage of the royalty, milestone or other payments paid to such third party. However, such adjustment in royalty payments to UTSW may not be reduced below a certain percentage of the royalty obligation in any contract year.

UTSW maintains direct control over the prosecution and maintenance activities of the Patent Rights, and the Company is obligated to reimburse past and ongoing patent expenses as noted above. UTSW will permit the Company to comment on submissions to government patent agencies, during prosecution and will consider the Company's comments, but UTSW retained control over all final decisions.

The UTSW1 Agreement contains a representation that UTSW has the rights and authority to grant to Company the licensed rights and is to its knowledge unaware of any third-party infringer or any infringement of third-party intellectual property rights. The UTSW1 Agreement also requires the Company to indemnify UTSW and other related parties against any liabilities, damages, causes of action, suits, judgments, liens, penalties, fines, losses, costs and expenses arising out of any product the Company produces under the UTSW1 Agreement, and requires the Company, beginning with the earlier of the first clinical trial or commercial sale or other commercialization, to obtain liability insurance.

The Company will have the first and sole right but not the obligation, at its own expense, to initiate an infringement suit or other appropriate actions against third party infringers and monetary recovery received therefrom, after the Company is reimbursed for expenses in enforcing the Patent Rights, is shared between the Company and UTSW pursuant to a good faith negotiation between the parties at that time. If the Company does not file suit within six months after a written request by UTSW, then UTSW may bring suit to enforce any Patent Right and retain all recoveries from such enforcement. If UTSW pursues such infringement action, it may, as part of the resolution of such efforts, grant nonexclusive license rights to the alleged infringer notwithstanding Licensee's exclusive license rights.

In accordance with the terms of the UTSW1 Agreement, on April 24, 2020 Company sublicensed all Company rights and obligations under the UTSW1 Agreement to Company affiliate THIO Therapeutics, Inc.

License Agreement 2 with The Board of Regents of The University of Texas System /The University of Texas Southwestern Medical Center

On December 23, 2020 (the "Effective Date"), we entered into a second agreement with The Board of Regents of The University of Texas System on behalf of The University of Texas Southwestern Medical Center, (collectively, UTSW), which set forth the agreement between the parties pursuant to the Company exercising its option rights in the UTSW1 Agreement and obtaining additional license rights ("the UTSW2 Agreement"). The license is exclusive as to worldwide Patent Rights for all uses in the Field, which is defined as all therapeutic, prophylactic and diagnostic fields of use for all indications, including discovery and development uses. The license is sublicensable with prior UTSW written approval consistent with the terms of UTSW2 Agreement.

The UTSW2 Agreement includes an exclusive license to the "Patent Rights" of the worldwide patent family including all provisional applications and any divisionals, continuations, continuations-in-part and foreign counterpart applications that are entitled to claim priority thereto, and any patents resulting therefrom, of the following

Title / PCT Application Number
Sequential Treatment of Cancers Using 6-Thio-dG and Checkpoint Inhibitors / PCT/US2021/022090

The UTSW2 Agreement also grants the Company a non-exclusive worldwide license under the Technology Rights to develop, manufacture, have manufactured, distribute, have distributed, use, offer for Sale, Sell, lease, loan and/or import Licensed Products in the Field, wherein Technology Rights means UTSW's rights in technical information, know-how, processes, procedures, compositions, devices, methods, formulas, protocols, techniques, designs, drawings or data created before the Effective Date by inventors at UTSW which are necessary or reasonably useful for practicing Patent Rights.

The terms of the UTSW2 Agreement are similar in many respects to those set forth in the UTSW1 Agreement. Pursuant to the UTSW2 Agreement, the Company paid to UTSW a nominal one-time upfront license fee. The UTSW2 Agreement recognizes the accrual of low five-figures in patent expenses relative to the Patent Rights of this agreement and provides for deferral of this fee and related ongoing patent expense fees on a schedule connected to the Company's fundraising through Series A funding. Once the Company has raised mid seven-figures, the patent expense fees are be paid in full for all patent expenses incurred by UTSW for the Company's licensed technologies which accrued between December 12, 2019, and the date at which the mid seven-figures has been raised. Until the Company has reimbursed all patent expenses it is obligated to report its fundraising progress to UTSW on a quarterly basis.

The milestone payments are the same as in the UTSW1 Agreement wherein the milestone fees are based solely on commercial sales milestones and are payable one time only, regardless of the number of licensed products or licensed services developed and regardless of the number of indications or patient sub-populations treated with a licensed product(s) and regardless of whether the licensed products or licensed services developed are within the rights granted by the UTSW1 Agreement or the UTSW2 Agreement. In other words, there are no milestone payments required on any development, or regulatory milestones under the UTSW1 Agreement or the UTSW2 Agreement. The only required milestone payment under the UTSW1 Agreement or the UTSW2 Agreement relate to commercial sales milestones and the aggregate amount of milestone fees payable pursuant to the UTSW1 Agreement or the UTSW2 Agreement will not exceed $112 million. In the event the Company assigns the UTSW2 Agreement to a third party, the Company is obligated to pay UTSW low six-figures within 15 days of such assignment, which is cumulative of the UTSW1 Agreement assignment fee, such that if both agreements are assigned to a third party, a total of high six-figures would be owed to UTSW. The agreement cannot be assigned without UTSW's consent.

The Company will also pay UTSW running royalties on a yearly basis as a percentage of Net Sales of the Company or its sublicensee. There are mid-single digit royalty rates for licensed products and licensed services covered by a Valid Claim (as defined in UTSW2 Agreement) and dependent on whether Net Sales are greater than or less than/equal to low ten-figures in sales, with Net Sales above that amount commanding a slightly higher percentage. In each case, the royalty percentage is lower before patent issuance in each jurisdiction. In the event that the licensed product or licensed service is not covered by a Valid Claim, the running royalty rates are reduced by a certain percentage. The royalty obligations continue on a country-by-country basis until the later of expiration of the last Valid Claim in each country or ten (10) years after the First Commercial Sale (as defined in UTSW2 Agreement) in each country. In the event that the Company or its sublicensee challenges the Patent Rights, then the Company will be obligated to pay multiple times the applicable royalty rate of the Net Sales and, should the outcome of such challenge determine that any claim of the Patent Rights challenged is both valid and infringed then the Company will pay royalties at the rate of multiple times the applicable royalty rate of the Net Sales sold thereafter and reimburse UTSW for all fees and costs associated with defending such challenge, including attorney's fees and expert fees.

The UTSW2 Agreement also contains an anti-stacking provision pursuant to which in the event the Company or its sublicensee pays royalties or other payments to a third party who owns or controls intellectual property deemed necessary to develop, manufacture, have manufactured, distribute, have distributed, use, lease, loan, import, offer for sale and/or sell any licensed products and licensed services, the Company may reduce payments to UTSW by a certain percentage of the royalty, milestone or other payments paid to such third party. However, such adjustment in royalty payments to UTSW may not be reduced by more than a minimum percentage of the royalty obligation in any contract year. In the event that the payment to the third party who owns or controls intellectual property deemed necessary to extend or expand the franchise or exclusivity of a previously launched licensed product (e.g., such as a new formulation as a second-generation product containing the same compound as the previously launched Licensed Product), then the Company may reduce payments to UTSW by a certain percentage of the royalty, milestone or other payments paid to such third party. However, such adjustment in royalty payments to UTSW may not be reduced by more than a certain percentage obligation in any contract year.

The Company has the development and reporting obligations as the UTSW1 Agreement and as with the UTSW1 Agreement, UTSW has reserved the right to publish the scientific findings related to the Patent Rights and use and to permit other academic institutions to use the licensed subject matter for teaching, research, education, and other educationally related, non-commercial purposes. The Patent Rights are also subject to any rights of the United States federal, state and/or local Government(s), as well as nonprofit entities, if certain patents or technologies were created in the course of Government-funded or non-profit entity-funded research.

The obligations and rights as to patent prosecution and defense of the Patent Rights are the same as those for the UTSW1 Agreement. The term and termination provisions of the UTSW2 Agreement is the same as the UTSW1 Agreement, however in the event that the UTSW1 Agreement is terminated for any reason, or expires, then the UTSW2 Agreement likewise is terminated or deemed to have expired.

The above description of UTSW1 Agreement and UTSW2 Agreement is just a summary and readers are referred to UTSW1 Agreement and UTSW2 Agreement, which are attached hereto as Exhibits 10.2 and 10.3 respectively, for a full and complete description of the patent expenses, milestone payments, fees and royalties payable by MAIA.

Competition

The biotechnology industry is characterized by a rapid evolution of technologies, significant competition and strong defense of intellectual property. While we believe that our platforms, technology, knowledge, experience, and scientific resources provide us with unique competitive advantages, we expect to face competition from major pharmaceutical and biotechnology companies, academic institutions, governmental agencies, and public and private research institutions, among others.

Any therapeutic candidates that we successfully develop and commercialize will compete with currently approved therapies and new therapies that may become available in the future. For example, current competitors in the non-small lung cancer indication are Merck, Regeneron, Eli Lilly and Roche. There are also many other large and small companies developing products for this indication. Key product features that, if approved, would affect our ability to effectively compete with other therapeutics include the efficacy, safety and convenience of our therapeutics, the ease of use and effectiveness of any complementary diagnostics and/or companion diagnostics, and price and levels of reimbursement.

Our competitors also include large pharmaceutical and biotechnology companies, which may be developing therapeutic candidates with mechanisms similar to our compounds or targeting the same clinical indications as our therapeutic candidates. The availability of reimbursement from government and other third-party payors will also significantly affect the pricing and competitiveness of our therapeutic candidates. Our competitors also may obtain FDA or other regulatory approval 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.

Many of the companies against which we may compete have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These early stage and more established competitors also compete with us in recruiting and retaining qualified

scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Government Regulation

Government authorities in the United States, at the federal, state and local level, and in other countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of products such as those we are developing. Any pharmaceutical candidate that we develop must be approved by the United States Food and Drug Administration, or FDA, before it may be legally marketed in the United States and by the appropriate foreign regulatory agency before it may be legally marketed in foreign countries.

United States Government Regulation

In the United States, the FDA regulates biopharmaceutical products under the Federal Food, Drug, and Cosmetic Act and the Public Health Services Act, or PHSA, and implementing regulations.

Approval Processes

The process required by the FDA before a drug or biological product may be marketed in the United States generally involves the following:

- Completion of preclinical laboratory tests, animal studies and formulation studies according to Good Laboratory Practices or other applicable regulations;
- Submission to the FDA of an Investigational New Drug Application, or an IND, which must become effective before human clinical trials may begin;
- Performance of several phases of adequate and well-controlled human clinical trials according to the FDA's current good clinical practices, or GCPs, to establish the safety and efficacy of the proposed drug or biologic for its intended use;
- Submission to the FDA of a New Drug Application, or an NDA, for a new drug product, or a Biologics License Application, or a BLA, for a new biological product;
- Satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the drug or biologic is to be produced to assess compliance with the FDA's current good manufacturing practice standards, or cGMP, to assure that the facilities, methods and controls are adequate to preserve the drug's or biologic's identity, strength, quality and purity;
- Potential FDA audit of the nonclinical and clinical trial sites that generated the data in support of the NDA or BLA; and
- FDA review and approval of the NDA or BLA.

Failure to comply with the applicable U.S. requirements at any time during the product development or approval process, or after approval, may subject an applicant to administrative or judicial sanctions brought by the FDA and the Department of Justice, or DOJ, or other governmental entities, any of which could have a material adverse effect on us. These sanctions could include:

- refusal to approve pending applications;
- withdrawal of an approval;
- imposition of a clinical hold;
- warning or untitled letters;
- seizures or administrative detention of product;
- total or partial suspension of production or distribution; or
- injunctions, fines, disgorgement, or civil or criminal penalties.

The lengthy process of seeking required approvals and the continuing need for compliance with applicable statutes and regulations require the expenditure of substantial resources. There can be no certainty that approvals will be granted.

Once a biopharmaceutical candidate is identified for development, it enters the preclinical or nonclinical testing stage. Nonclinical tests include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies. An IND sponsor must submit the results of the nonclinical tests, together with manufacturing information and analytical data, to the FDA as part of the IND. Some nonclinical testing may continue even after the IND is submitted. In addition to including the results of the nonclinical studies, the IND will also include a protocol detailing, among other things, the objectives of the clinical trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated if the first phase lends itself to an efficacy determination. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, places the IND on clinical hold. In this case, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can begin. A clinical hold may occur at any time during the life of an IND and may affect one or more specific studies or all studies conducted under the IND.

Clinical trials involve the administration of the drug or biological candidate to healthy volunteers or patients having the disease being studied under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety. Each protocol must be submitted to the FDA as part of the IND. Clinical trials must be conducted in accordance with the FDA's good clinical practices requirements. Further, each clinical trial must be reviewed and approved by an independent institutional review board, or IRB, at or servicing each institution at which the clinical trial will be conducted. 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 it is completed.

Human clinical trials prior to approval are typically conducted in three sequential Phases that may overlap or be combined:

- Phase 1. The drug or biologic is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients having the specific disease.
- Phase 2. The drug or biologic is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule for patients having the specific disease.
- Phase 3. Clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials, which usually involve more subjects than earlier trials, are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for product labeling. Generally, at least two adequate and well-controlled Phase 3 clinical trials are required by the FDA for approval of an NDA or BLA.

Post-approval studies, or Phase 4 clinical trials, may be conducted after initial marketing approval. These studies are used to gain additional experience from the treatment of patients in the intended therapeutic indication and may be required by the FDA as part of the approval process.

Progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA and written IND safety reports must be submitted to the FDA by the investigators for serious and unexpected adverse events or any finding from tests in laboratory animals that suggests a significant risk for human subjects. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor or its data safety monitoring board 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 or biologic has been associated with unexpected serious harm to patients.

Concurrent with clinical trials, companies usually complete additional animal studies and develop additional information about the chemistry and physical characteristics of the drug or biologic as well as 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 drug or biological candidate and, among other things, must include methods for testing the identity, strength, quality and purity of the final drug or biologic. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the drug or biological candidate does not undergo unacceptable deterioration over its shelf life.

U.S. Review and Approval Processes

The results of product development, preclinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug or biologic, proposed labeling and other relevant information are submitted to the FDA as part of an NDA or BLA requesting approval to market the product. The submission of an NDA or BLA is subject to the payment of substantial user fees; a waiver of such fees may be obtained under certain limited circumstances.

The FDA reviews for completeness all NDAs and BLAs submitted before it accepts them for filing and may request additional information rather than accepting an NDA or BLA for filing. Once the submission is accepted for filing, the FDA begins an in-depth review of the NDA or BLA.

After the NDA or BLA submission is accepted for filing, the FDA reviews the application to determine, among other things, whether the proposed product is safe and effective for its intended use, and whether the product is being manufactured in accordance with cGMP to assure and preserve the product's identity, strength, quality and purity. The FDA reviews a BLA to determine, among other things, whether the product is safe, pure and potent and the facility in which it is manufactured, processed, packaged or held meets standards designed to assure the product's continued safety, purity and potency. In addition to its own review, the FDA may refer applications for novel drug or biological products or drug or biological products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and 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. During the approval process, the FDA also will determine whether special marketing conditions or restrictions under a risk evaluation and mitigation strategy, or REMS, are necessary to assure the safe use of the drug or biologic. If the FDA concludes that a REMS is needed, the sponsor of the NDA or BLA must submit a proposed REMS; the FDA will not approve the NDA or BLA without a REMS, if required.

Before approving an NDA or BLA, the FDA will inspect the facilities at which the product is to be manufactured, and may also inspect facilities that provide raw materials for use in the product. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA or BLA, the FDA will typically inspect one or more clinical trial sites to assure their compliance with cGCP during the conduct of studies of the subject drug. If during the review of the application the FDA identifies questions or concerns regarding the application, data, manufacturing process or manufacturing facilities, it may issue a deficiency letter which the sponsor must adequately address to the FDA's satisfaction.

The NDA or BLA review and approval process is lengthy and difficult, and the FDA may refuse to approve an NDA or BLA if the applicable regulatory criteria are not satisfied or may require additional clinical data or other data and information. Even if such data and information is submitted, the FDA may ultimately decide that the NDA or BLA does not, in its submitted form, satisfy the criteria for approval. Data obtained from clinical trials are not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. The FDA will issue a "complete response letter" (CRL) if the agency decides not to approve the NDA or BLA. The complete response letter usually describes the specific deficiencies in the NDA or BLA identified by the FDA. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical trials. Additionally, the complete response letter will typically include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the NDA or BLA, addressing all of the deficiencies identified in the letter, or withdraw the application.

If a product receives regulatory approval, the approval may be for more limited conditions of use than the sponsor had proposed, such as limitations to specific diseases or subsets of a disease, limited patient populations, second-line or third-line use limitations, limited dosages or other limitations which could restrict the commercial value of the

product. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling. In addition, the FDA may require Phase 4 testing which may involve clinical trials designed to further assess a product's safety and effectiveness and may require testing and surveillance programs to monitor the safety of approved products that have been commercialized.

Companion Diagnostics

Many drugs for cancer indications involving patient-specific genetic mutations or biomarkers are approved by FDA with limitations that the specific genetic mutation must be confirmed in each patient by use of an FDA-approved diagnostic test, commonly referred to as a "companion diagnostic." The FDA issued a final guidance document in July 2014 addressing agency policy in relation to *in vitro* companion diagnostic tests. The guidance explains that for some drugs and therapeutic biologics, the use of a companion diagnostic test is essential for the safe and effective use of the product, such as when the use of a product is limited to a specific patient subpopulation that can be identified by using the test. According to the guidance, the FDA generally will not approve such a product if the companion diagnostic is not also approved or cleared for the appropriate indication, and accordingly the therapeutic product and the companion diagnostic should be developed and approved or cleared contemporaneously. The FDA has also issued a Guidance, *Principles for Codevelopment of an In Vitro Companion Diagnostic Device with a Therapeutic Product* (2016), which is "is intended to be a practical guide to assist therapeutic product sponsors and IVD sponsors in developing a therapeutic product and an accompanying IVD companion diagnostic," and a Guidance, *Developing and Labeling In vitro Companion Diagnostic Devices for a Specific Group of Oncology Therapeutic Products* (2020), which "describes considerations for the development and labeling of in vitro companion diagnostic devices (referred to as "companion diagnostics" herein) to support the indicated uses of multiple drug or biological oncology products, when appropriate."

As stated in its Guidances, the FDA may decide that it is appropriate to approve such a product without an approved or cleared *in vitro* companion diagnostic device when the drug or therapeutic biologic is intended to treat a serious or life-threatening condition for which no satisfactory alternative treatment exists and the FDA determines that the benefits from the use of a product with an unapproved or uncleared *in vitro* companion diagnostic device are so pronounced as to outweigh the risks from the lack of an approved or cleared *in vitro* companion diagnostic device. The FDA encourages sponsors considering developing a therapeutic product that requires a companion diagnostic to request a meeting with both relevant device and therapeutic product review divisions to ensure that the product development plan will produce sufficient data to establish the safety and effectiveness of both the therapeutic product and the companion diagnostic. To date, no product targeting TERT+ cancer patients has been approved by FDA, and the applicability to THIO of FDA's Companion Diagnostics Guidance and policy is yet to be determined. If a companion diagnostic is required to be developed and approved in order to receive approval of THIO, the cost and length of time to fully develop and receive approval (if at all) of THIO may both be increased, as described in more detail in the section *Risk Factors – Risks Relating to Government Regulation.* Because the FDA's policy on companion diagnostics is set forth only in guidance, this policy is subject to change and is not legally binding.

Expedited Development and Review Programs

The FDA has a Fast-Track program that is intended to expedite or facilitate the process for reviewing new drug and biological products that meet certain criteria. Specifically, new drug and biological products are eligible for Fast Track designation if they are intended to treat a serious or life-threatening condition and demonstrate the potential to address unmet medical needs for the condition. Fast Track designation applies to the combination of the product and the specific indication for which it is being studied. Under a Fast Track designation, the FDA may consider for review sections of the NDA or BLA on a rolling basis before the complete application is submitted, if (i) the sponsor provides a schedule for the submission of the sections of the NDA or BLA, (ii) the FDA agrees to accept sections of the NDA or BLA and determines that the schedule is acceptable, and (iii) the sponsor pays any required user fees upon submission of the first section of the NDA or BLA.

Any product submitted to the FDA for marketing approval, including those submitted under 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. Any product is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or the new product has the potential to offer a significant improvement in the treatment, diagnosis or prevention of a disease compared with marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new

drug or biological product designated for priority review in an effort to facilitate the review. Additionally, a product may be eligible for accelerated approval. Drug or biological products studied for their safety and effectiveness in treating serious or life-threatening illnesses and that provide meaningful therapeutic benefit over existing treatments may receive accelerated approval, which means that they may be approved on the basis of adequate and well-controlled clinical studies establishing that the product has an effect on a surrogate endpoint that is reasonably likely to predict a clinical benefit, or on the basis of an effect on a clinical endpoint other than survival or irreversible morbidity. As a condition of accelerated approval, the FDA generally requires that a sponsor of a drug or biological product receiving accelerated approval perform adequate and well-controlled post-marketing clinical studies to confirm the safety and efficacy for the approved indication. Failure to conduct such studies or conducting such studies that do not establish the required safety and efficacy may result in revocation of the original accelerated approval. In addition, the FDA currently requires as a condition for accelerated approval, pre-approval of promotional materials, which could adversely impact the timing of the commercial launch or subsequent marketing of the product. Fast Track designation, priority review and accelerated approval do not change the standards for approval but may expedite the development or approval process, and even if granted, accelerated approval status does not guarantee an accelerated review or marketing approval by the FDA.

The Hatch-Waxman Amendments and Generic Competition

Orange Book Listing

Once a drug product is approved under an NDA, the product is listed in the FDA's publication, "Approved Drug Products with Therapeutic Equivalence Evaluations," commonly known as the Orange Book. An NDA-approved drug product will be designated in the Orange Book as a Reference Listed Drug (RLD). Sponsors of approved NDA's are required to list with the FDA patents whose claims cover the product's active ingredient, formulation, or an approved method of using the drug.

Patent Term Extensions

Depending upon the timing, duration and specifics of FDA approval of the use of our therapeutic candidates, some of our United States patents may be eligible for limited patent term extension under the Hatch-Waxman Act. The Hatch-Waxman Act permits a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product or therapeutic candidate's approval date. The patent term restoration period is generally one half of the time between the effective date of an IND and the submission date of a NDA, plus the time between the submission date of a NDA and the approval of that application, except that the review period is reduced by any time during which the applicant failed to exercise due diligence. Only one patent applicable to an approved product or therapeutic candidate is eligible for the extension and the application for extension must be made prior to expiration of the patent. The USPTO, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we intend to apply for restorations of patent term for some of our currently owned or licensed patents to add patent life beyond their current expiration date, depending on the expected length of clinical trials and other factors involved in the submission of the relevant NDA.

ANDA Approval Process

The Hatch-Waxman Amendments established an abbreviated FDA approval process for generic drugs that are shown to be pharmaceutically equivalent and bioequivalent to drugs previously approved by the FDA through the NDA process. Approval to market and distribute these drugs is obtained by filing an abbreviated new drug application, or ANDA, with the FDA. An ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths and dosage form as the listed drug and has been shown to be bioequivalent to the listed drug. An ANDA is a comprehensive submission that contains, among other things, data and information pertaining to the active pharmaceutical ingredient, drug product formulation, specifications and stability of the generic drug, as well as analytical methods, manufacturing process validation data and quality control procedures. ANDAs are termed abbreviated because they generally do not include preclinical and clinical data to demonstrate safety and effectiveness. Instead, a generic applicant must demonstrate that its product is bioequivalent to the innovator drug. Drugs approved in this way are commonly referred to as "generic equivalents" to the listed drug and can often be substituted by pharmacists under prescriptions written for the original listed drug.

Section 505(b)(2) NDA Approval Process

As an alternative path to FDA approval for modifications to formulations or uses of products previously approved by the FDA, an applicant may submit an NDA under Section 505(b)(2) of the FDCA. Section 505(b)(2) was enacted as part of the Hatch-Waxman Amendments to the FDCA and enables the applicant to rely, in part, on the FDA's previous approval of a similar product, and/or published literature, in support of its application. Section 505(b)(2) permits the filing of an NDA where at least some of the information required for approval comes from studies not conducted by, or for, the applicant and for which the applicant has not obtained a right of reference. If the Section 505(b)(2) applicant can establish that reliance on FDA's previous findings of safety and effectiveness is scientifically appropriate, it may eliminate the need to conduct certain preclinical studies or clinical trials of the new product. The FDA may also require companies to perform additional studies or measurements, including clinical trials, to support the change from the approved reference drug. The FDA may then approve the new product candidate for all, or some, of the label indications for which the reference drug has been approved or for any new indication sought by the Section 505(b)(2) applicant.

ANDA and 505(b)(2) products may be significantly less costly to bring to market than the reference listed drug, and companies that produce generic products are generally able to offer them at lower prices. Moreover, generic versions of RLDs are often automatically substituted for the RLD by pharmacies when dispensing a prescription written for the RLD. Thus, following the introduction of a generic drug, a significant percentage of the sales of any branded product or reference listed drug is typically lost to the generic product.

ANDA and 505(b)(2) NDA Patent Certification Requirements

Any applicant who files an ANDA seeking approval of a generic equivalent version of a drug listed in the Orange Book or a Section 505(b)(2) NDA referencing a drug listed in the Orange Book must certify to the FDA, as applicable, that (1) no patent information on the drug product that is the subject of the application has been submitted to the FDA; (2) such patent has expired; (3) the date on which such patent expires; or (4) such patent is invalid or will not be infringed upon by the manufacture, use or sale of the drug product for which the application is submitted. This last certification is known as a paragraph IV certification. If an ANDA is submitted to FDA with a Paragraph IV Certification, the generic applicant must also provide a "Paragraph IV Notification" to the holder of the NDA for the RLD and to the owner of the listed patent(s) being challenged by the ANDA applicant, providing a detailed written statement of the bases for the ANDA applicant's position that the relevant patent(s) is invalid or would not be infringed. If the patent owner brings a patent infringement lawsuit against the ANDA applicant within 45 days of the Paragraph IV Notification, FDA approval of the ANDA will be automatically stayed for 30 months, or until 7-1/2 years after the NDA approval if the generic application was filed between 4 years and 5 years after the NDA approval. Any such stay will be terminated earlier if the court rules that the patent is invalid or would not be infringed. The applicant may, in certain circumstances, elect to submit a "section viii" statement with respect to a listed method of use patent, certifying that the proposed generic labeling does not contain (or carves out) any language that would infringe a method of use patented listed in the Orange Book for the RLD.

The ANDA or Section 505(b)(2) application also will not be approved until any applicable non-patent exclusivity listed in the Orange Book for the reference drug has expired as described in further detail below.

Regulatory Exclusivities

New Chemical Entity (NCE) Exclusivity

The Hatch-Waxman amendments provides a period of five years of non-patent marketing exclusivity for the first approved drug containing a new chemical entity ("NCE") as an active ingredient. An NCE is an active moiety that has not been approved by the FDA in any other NDA. A fixed combination drug product may receive NCE exclusivity if one of its active ingredients is an NCE, but not if all of its active ingredients have previously been approved. An "active moiety" is defined as the molecule or ion responsible for the drug substance's physiological or pharmacologic action. During the five-year exclusivity period, the FDA cannot accept for filing any ANDA or 505(b)(2) NDA seeking approval of a product that contains the same active moiety, except that the FDA may accept such an application for filing after four years if the application includes a paragraph IV certification to a listed patent. In the case of such applications accepted for filing between four and five years after approval of the reference

drug, the 30-Month Stay of approval triggered by a timely patent infringement lawsuit is extended by the amount of time necessary to extend the stay until 7-1/2 years after the approval of the reference drug NDA.

New Clinical Trial (3-Year) Exclusivity

A drug, including one approved under Section 505(b)(2), may obtain a three-year period of exclusivity for a particular indication or condition of approval, or change to a marketed product, such as a new formulation for a previously approved product, if one or more new clinical trials (other than bioavailability studies) was essential to the approval of the application or supplemental application and was conducted/sponsored by the applicant. Should this occur, the FDA would be precluded from approving any ANDA or Section 505(b)(2) application for the protected modification until after that three-year exclusivity period has run. However, unlike NCE exclusivity, the FDA can accept an application and begin the review process during the exclusivity period.

Orphan Drug Designation and Orphan Exclusivity

Under the Orphan Drug Act, the FDA may grant Orphan Drug Designation to a therapeutic candidate intended to treat a rare disease or condition, which is generally a disease or condition that affects either (i) fewer than 200,000 individuals in the United States, or (ii) more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making available in the United States a product or therapeutic candidate for this type of disease or condition will be recovered from sales in the United States for that product or therapeutic candidate. Orphan Drug Designation must be requested before submitting a BLA. After the FDA grants Orphan Drug Designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan Drug Designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product or therapeutic candidate that has Orphan Drug Designation subsequently receives the first FDA approval for the disease for which it has such designation, the approved product is entitled to orphan product exclusivity, which means that the FDA may not approve any other marketing applications for the same drug for the same indication, except under limited circumstances, for seven years. Orphan product exclusivity, however, could also block the approval of one of our therapeutic candidates for seven years if a competitor obtains approval of the same drug as defined by the FDA, or if our therapeutic candidate is determined to be contained within a competitor's approved drug for the same indication or disease.

In addition, an orphan drug credit is available for qualifying costs incurred between the date the FDA designates a drug as an orphan drug and the date the FDA approves the drug.

Pediatric Exclusivity

Pediatric exclusivity is another type of non-patent marketing exclusivity available in the United States and, if granted, it provides for the attachment of an additional six months of marketing protection to the term of any existing regulatory exclusivity or listed patents. Under the Best Pharmaceuticals for Children Act, or BPCA, certain therapeutic candidates may obtain an additional six months of exclusivity if the sponsor conducts pediatric research and submits new clinical information requested in writing by the FDA, referred to as a Written Request, relating to the use of the active moiety of the product or therapeutic candidate in children. The data do not need to support a label change for pediatric use; rather, the additional protection is granted if the pediatric clinical trial is deemed to have fairly responded to the FDA's Written Request. Although the FDA may issue a Written Request for studies on either approved or unapproved indications, it may only do so where it determines that information relating to that use of a product or therapeutic candidate in a pediatric population, or part of the pediatric population, may produce health benefits in that population. The issuance of a Written Request does not require the sponsor to undertake the described trials. This is not a patent term extension, but it effectively extends the regulatory period during which the FDA cannot approve another application.

Post-Approval Requirements

Following approval of a new drug or biologic product, the manufacturer and the approved product are subject to pervasive and continuing regulation by the FDA, including, among other things, continuing cGMP compliance, monitoring and recordkeeping activities, reporting of adverse experiences with the product, product sampling and

distribution restrictions, complying with promotion and advertising requirements, which include restrictions on promoting drugs for unapproved uses or patient populations (i.e., "off-label use") and limitations on industry-sponsored scientific and educational activities. Although physicians may prescribe legally available products for off-label uses, manufacturers may not market or promote such uses. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability. If there are any modifications to the product, including changes in indications, labeling or manufacturing processes or facilities, the applicant may be required to submit and obtain FDA approval of a new NDA or a NDA supplement, which may require the applicant to develop additional data or conduct additional preclinical studies and clinical trials.

Once an NDA or BLA approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product or therapeutic reaches the market. Later discovery of previously unknown problems with a product or therapeutic candidate, including adverse events of unanticipated severity or frequency, may result in in mandatory revisions to the approved labeling to add new safety information; imposition of post-market or clinical trials to assess new safety risks; or imposition of distribution or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or other enforcement-related letters or clinical holds on post-approval clinical trials;
- refusal of the FDA to approve pending applications or supplements to approved application, or suspension or revocation of product approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- injunctions or the imposition of civil or criminal penalties;
- consent decrees, corporate integrity agreements, debarment, or exclusion from federal health care programs; or
- mandated modification of promotional materials and labeling and the issuance of corrective information.

Accordingly, a therapeutic candidate manufactured or distributed by us pursuant to FDA approvals are subject to continuing regulation by the FDA, including, among other things:

- cGMP compliance requirements;
- record-keeping requirements;
- reporting of adverse experiences with the therapeutic candidate;
- providing the FDA with updated safety and efficacy information;
- therapeutic sampling and distribution requirements;
- notifying the FDA and gaining its approval of specified manufacturing or labeling changes; and
- complying with FDA promotion and advertising requirements, which include, among other things, standards for direct-to-consumer advertising, restrictions on promoting products for uses or in-patient populations that are not described in the product's approved labeling, limitations on industry-sponsored scientific and educational activities and requirements for promotional activities involving the internet.

FDA regulations require that products be manufactured in specific approved facilities and in accordance with cGMPs. The cGMP regulations include requirements relating to organization of personnel, buildings and facilities, equipment, control of components and drug product containers and closures, production and process controls, packaging and labeling controls, holding and distribution, laboratory controls, records and reports and returned or salvaged products. Therapeutic manufacturers and other entities involved in the manufacture and distribution of approved therapeutic products are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA, foreign regulatory agencies, and some state agencies for compliance with cGMPs and other laws. In addition, changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require FDA approval before being implemented. FDA regulations also require investigation and correction of any noncompliance with cGMP requirements. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting and documentation requirements upon the NDA or BLA applicant and any third-party manufacturers involved in producing the approved product. 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 quality control and quality assurance.

In addition, the distribution of prescription pharmaceutical products is subject to the Prescription Drug Marketing Act, or the 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. The Drug Supply Chain Security Act, or the DSCSA, was enacted with the aim of building an electronic system to identify and trace certain prescription drugs distributed in the United States, including most biological products. The DSCSA mandates phased-in and resource-intensive obligations for pharmaceutical manufacturers, wholesale distributors, and dispensers over a 10‑year period that is expected to culminate in November 2023. From time to time, new legislation and regulations may be implemented that could significantly change the statutory provisions governing the approval, manufacturing and marketing of products regulated by the FDA. It is impossible to predict whether further legislative or regulatory changes will be enacted, or FDA regulations, guidance or interpretations changed or what the impact of such changes, if any, may be.

Regulation Outside of the United States

In addition to regulations in the United States, we will be subject to regulations of other jurisdictions governing any clinical trials and commercial sales and distribution of our therapeutic candidates. Whether or not we obtain FDA approval for a product, we must obtain approval by the comparable regulatory authorities of countries outside of the United States before we can commence clinical trials in such countries and approval of the regulators of such countries or economic areas, such as the European Union, before we may market products in those countries or areas. It also is not yet clear how the United Kingdom's recent withdrawal from the European Union will affect the approval of medicinal products in the United Kingdom. The approval process and requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from place to place, and the time may be longer or shorter than that required for FDA approval.

Under European Union regulatory systems, a company can consider applying for marketing authorization in several European Union member states by submitting its marketing authorization application(s) under a centralized, decentralized or mutual recognition procedure. The centralized procedure provides for the grant of a single marketing authorization that is valid for all European Union member states. The centralized procedure is compulsory for medicines derived from biotechnology, orphan medicinal products, or those medicines with an active substance not authorized in the European Union on or before May 20, 2004 intended to treat acquired immune deficiency syndrome, cancer, neurodegenerative disorders or diabetes and optional for those medicines containing a new active substance not authorized in the European Union on or before May 20, 2004, medicines which are highly innovative, or medicines to which the granting of a marketing authorization under the centralized procedure would be in the interest of patients at the European Union-level. The decentralized procedure provides for recognition by European Union national authorities of a first assessment performed by one of the member states. Under this procedure, an identical application for marketing authorization is submitted simultaneously to the national authorities of several European Union member states, one of them being chosen as the "Reference Member State," and the remaining being the "Concerned Member States." The Reference Member State must prepare and send drafts of an assessment report, summary of product characteristics and the labelling and package leaflet within 120 days after receipt of a valid marketing authorization application to the Concerned Member States, which must decide within 90 days whether to recognize approval. If any Concerned Member State does not recognize the marketing authorization on the grounds of potential serious risk to public health, the disputed points are eventually referred to the European Commission, whose decision is binding on all member states. The mutual recognition procedure is similar to the decentralized procedure except that a medicine must have already received a marketing authorization in at least one of the member states, and that member state acts as the Reference Member State.

As in the United States, we may apply for designation of a therapeutic candidate as an orphan drug for the treatment of a specific indication in the European Union before the application for marketing authorization is made.

Orphan drugs in the European Union enjoy economic and marketing benefits, including up to ten years of market exclusivity for the approved indication unless another applicant can show that its product is safer, more effective or otherwise clinically superior to the orphan-designated product, the marketing authorization holder is unable to supply sufficient quantity of the medicinal product, or the marketing authorization holder has given its consent.

Coverage, Pricing and Reimbursement

Sales of our products will depend, in part, on the extent to which our products will be covered by third-party payors, such as government health programs, commercial insurance and managed healthcare organizations. There may be significant delays in obtaining coverage and reimbursement for approved products, and coverage may be more limited than the purposes for which the product is approved by the FDA or regulatory authorities in other countries. It is time consuming and expensive to seek reimbursement from third-party payors. Moreover, eligibility for reimbursement does not imply that any product will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim payments for new products, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Payment rates may vary according to the use of the product and the clinical setting in which it is used, may be based on payments allowed for lower cost products that are already reimbursed and may be incorporated into existing payments for other services. Net prices for products may be reduced by mandatory discounts or rebates required by third-party payors and by any future relaxation of laws that presently restrict imports of products from countries where they may be sold at lower prices than in the United States. In the U.S., third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies, but they also have their own methods and approval process apart from Medicare coverage and reimbursement determinations. Accordingly, one third-party payor's determination to provide coverage for a product does not assure that other payors will also provide coverage for the product.

Additionally, the containment of healthcare costs has become a priority of federal and state governments and the prices of therapeutics have been a focus in this effort. The United States government, state legislatures and foreign governments have shown significant interest in implementing cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic and biosimilar 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 our net revenue and results. If these third-party payors do not consider our products to be cost-effective compared to other therapies, they may not cover our products after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products on a profitable basis. In addition, companion diagnostic tests require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement for the pharmaceutical or biological products apply to companion diagnostics.

Moreover, in some foreign countries, the proposed pricing for a product and therapeutic candidate must be approved before it may be lawfully marketed. The requirements governing therapeutic pricing vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our therapeutic candidates. Historically, therapeutic candidates launched in the European Union do not follow price structures of the United States and generally tend to be significantly lower.

Healthcare Reform

In the United States and some foreign jurisdictions, there have been, and continue to be, several legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of product and therapeutic candidates, restrict or regulate post-approval activities, and affect the ability to profitably sell product and therapeutic candidates that obtain marketing approval. 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 and therapeutic candidates. For example, in the United States, the system for FDA to collect and expend user fees paid by manufacturers of drugs, biologics, and medical devices must be reauthorized by statute every five years, and since 1992, each reauthorization legislation has included, to greater or lesser degrees, various other changes to the FDA's regulatory systems and procedures. The current legislative authority for FDA user fees expires in September 2022, and by that time, new legislation will be required for FDA to continue collecting prescription drug user fees in future fiscal years. The expected 2022 reauthorization may include new legal provisions that could significantly impact our business in ways that cannot be predicted at this time. 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 otherwise may have obtained and we may not achieve or sustain profitability, which would adversely affect our business, prospects, financial condition and results of operations. Moreover, among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of reducing drug prices, containing healthcare costs more generally, improving quality and/or expanding access.

For example, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA, was enacted in March 2010 and has had a significant impact on the health care industry in the U.S. The ACA expanded coverage for the uninsured while at the same time containing overall healthcare costs. It also included the BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. With regard to biopharmaceutical products, the ACA, among other things, addressed 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, increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees on manufacturers of certain branded prescription drugs, and created a new Medicare Part D coverage gap discount program.

Since its enactment, there have been executive, judicial and Congressional challenges to certain aspects of the ACA and we expect there may be additional challenges and amendments to the ACA in the future.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA that affect health care expenditures. These changes include aggregate reductions to Medicare payments to providers of up to 2% per fiscal year pursuant to the Budget Control Act of 2011, which began in 2013 and will remain in effect through 2030 unless additional Congressional action is taken. The Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, which was signed into law on March 27, 2020, and was designed to provide financial support and resources to individuals and businesses affected by the COVID-19 pandemic, suspended the 2% Medicare sequester from May 1, 2020 through December 31, 2020, and extended the sequester by one year, through 2030, in order to offset the added expense of the 2020 cancellation.

Additionally, on December 20, 2019, the Further Consolidated Appropriations Act for 2020 became law (P.L. 116-94), which includes a piece of bipartisan legislation called the Creating and Restoring Equal Access to Equivalent Samples Act of 2019 or the "CREATES Act." The CREATES Act aims to address the concern articulated by both the FDA and others in the industry that some brand manufacturers have improperly restricted the distribution of their products, including by invoking the existence of a REMS for certain products, to deny generic and biosimilar product developers access to samples of brand products. Because generic and biosimilar product developers need samples to conduct certain comparative testing required by the FDA, some have attributed the inability to timely obtain samples as a cause of delay in the entry of generic and biosimilar products. To remedy this concern, the CREATES Act establishes a private cause of action that permits a generic or biosimilar product developer to sue the brand manufacturer to compel it to furnish the necessary samples on "commercially reasonable, market-based terms." Whether and how generic and biosimilar product developments will use this new pathway, as well as the likely outcome of any legal challenges to provisions of the CREATES Act, remain highly uncertain and its potential effects on our future commercial products are unknown.

Moreover, there has been heightened governmental scrutiny over the manner in which 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. While the Trump administration put forward various proposals and executive orders aimed at reducing drug prices, the Biden administration is likely to pursue its own proposals going forward. In August 2021, President Biden announced his support for legislative proposals to grant Medicare the power to negotiate lower drug prices, for pharmaceutical companies to face penalties if they raise prices faster than inflation, and to impose a new cap on how much Medicare recipients have to spend on medications. Such proposals may be included in upcoming legislation in Congress, but the outcome of such proposals remains uncertain.

Individual states in the United States have also increasingly passed legislation and implemented regulations designed to control pharmaceutical 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.

We 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 expect that additional state and federal health care reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for health care products and services.

Other Healthcare Laws

Our current and future business operations are subject to healthcare regulation and enforcement by the federal government and the states and foreign governments where we research, and, if approved, market, sell and distribute our therapeutic candidates. These laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, privacy and security, physician sunshine and drug pricing transparency laws and regulations such as:

- The federal Anti-Kickback Statute prohibits, among other things, any person from knowingly and willfully offering, soliciting, receiving or providing remuneration, directly or indirectly, to induce either the referral of an individual, for an item or service or the purchasing or ordering of a good or service, for which payment may be made under federal healthcare programs such as the Medicare and Medicaid programs. The federal Anti-Kickback Statute is subject to evolving interpretations. In the past, the government has enforced the federal Anti-Kickback Statute to reach large settlements with healthcare companies based on sham consulting and other financial arrangements with physicians. 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. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;
- The federal civil and criminal false claims laws, including the civil False Claims Act, and civil monetary penalty laws, prohibit, among other things, knowingly presenting or causing the presentation of a false, fictitious or fraudulent claim for payment to the U.S. government, knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the U.S. government, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. government. Actions under these laws may be brought by the Attorney General or as a qui tam action by a private individual in the name of the government. The federal government uses these laws, and the accompanying threat of significant liability, in its investigation and prosecution of pharmaceutical and biotechnology companies throughout the U.S., for example, in connection with the promotion of products for unapproved uses and other allegedly unlawful sales and marketing practices;
- The U.S. federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, includes federal, civil and criminal provisions that prohibit among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- The Physician Payments Sunshine Act, among other things, imposes requirements on manufacturers of FDA-approved drugs, devices, biologics and medical supplies covered by Medicare or Medicaid to report, on an annual basis, to HHS information related to payments and other transfers of value to physicians (defined to include doctors, dentists, optometrists, podiatrists, chiropractors and, beginning in 2022 for payments and other transfers of value provided in the previous year, certain advanced non-physician health care practitioners), teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their respective implementing regulations impose specified requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's privacy and security standards directly applicable to "business associates," defined as independent contractors or agents of covered entities, which include certain healthcare providers,

health plans, and healthcare clearinghouses, that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorney's fees and costs associated with pursuing federal civil actions; and

- Analogous state laws and regulations, such as state anti-kickback and false claims laws which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; state laws which require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring drug and therapeutic biologics manufacturers to report information related to payments to physicians and other healthcare providers or marketing expenditures and pricing information; state and local laws which require the registration of pharmaceutical sales representatives; and state laws and non-United States laws and regulations (particularly European Union laws regarding personal data relating to individuals based in Europe) that govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways, thus complicating compliance efforts.
- Ensuring that our current and future business arrangements with third parties comply with applicable healthcare laws and regulations could involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations, agency guidance 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 such requirements, we may be subject to significant civil, criminal and administrative penalties, including monetary damages, fines, disgorgement, imprisonment, loss of eligibility to obtain approvals from the FDA, exclusion from participation in government contracting, healthcare reimbursement or other government programs, including Medicare and Medicaid, reputational harm, diminished profits and future earnings, additional reporting requirements if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with any of these laws, and the curtailment or restructuring of our operations.

Manufacturing

We do not own or operate manufacturing facilities to produce any of our therapeutic candidates, nor do we have plans to develop our own manufacturing operations in the foreseeable future. We currently depend on third-party contract manufacturers for all our required raw materials, Active Pharmaceutical Ingredient (API), and finished products for our preclinical and clinical trials and if and when applicable, commercialization. We currently employ internal resources to manage our manufacturing relationships with these third parties.

Manufacturers of our products are required to comply with applicable FDA manufacturing requirements contained in the FDA's current good manufacturing practices, or cGMP, regulations. cGMP regulations require, among other things, quality control and quality assurance as well as corresponding maintenance of records and documentation. Pharmaceutical product manufacturers and other entities involved in the manufacture and distribution of approved pharmaceutical products 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 and other laws. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance. Discovery of problems with a product after approval may result in restrictions on a product, manufacturer or holder of an approved NDA, including withdrawal of the product from the market. In addition, changes to the manufacturing process generally require prior FDA approval before being implemented.

Facilities

Our headquarters is in Chicago, Illinois where we currently lease office space with approximately 124 square feet under a six month lease starting in October 2021, under which we currently pay $2,700 per month. We expect to renew this lease before it expires. We believe that this space is sufficient to meet our needs for the foreseeable future and that any additional space we may require will be available on commercially reasonable terms. Additionally, we

intend to maintain our business model designed to leverage virtual technology to minimize brick and mortar facilities while optimizing our ability to attract top talented employees that may reside in any geography.

Employees

As of March 28, 2022, we had a total of nine key full-time employees. We believe that we maintain a satisfactory working relationship with our employees, and we have not experienced any significant labor disputes or any difficulty in recruiting staff for our operations. None of our employees is represented by a labor union.

Human Capital Resources

Employee Engagement, Talent Development & Benefits. 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, and opportunities for equity ownership.

Diversity, Inclusion, and Culture. Much of our success is rooted in the diversity of our teams and our commitment to inclusion. We value diversity at all levels and continue to focus on extending our diversity and inclusion initiatives across our entire workforce. We believe that our business benefits from the different perspectives a diverse workforce brings, and we pride ourselves on having a strong, inclusive and positive culture based on our shared mission and values.

Legal Proceedings

We are not party to any material legal proceedings. From time to time, we may be involved in legal proceedings or subject to claims incident to the ordinary course of business. Regardless of the outcome, such proceedings or claims can have an adverse impact on us because of defense and settlement costs, diversion of resources and other factors, and there can be no assurances that favorable outcomes will be obtained.

MANAGEMENT

Executive Officers and Directors

The following table provides information regarding our executive officers and directors as of the date of this prospectus:

Name	Age	Position
Executive Officers		
Vlad Vitoc	52	Co-Founder President, Chief Executive Officer, Chairman of the Board of Directors
Sergei M. Gryaznov	62	Chief Scientific Officer
Mihail Obrocea	61	Chief Medical Officer
Joseph F. McGuire	63	Chief Financial Officer
Board of Directors (Non-Employee)		
Steven Chaouki	49	Director
Ramiro Guerrero	56	Director
Louie Ngar Yee	55	Director
Cristian Luput	47	Director
Stan Smith	75	Director
Laurentiu Vlad	46	Director

Our Leadership Team

We have assembled a team with deep research, development and commercialization experience in the areas of telomere related science, immunotherapy, and across a vast array of oncology indications. Members of our team bring experience from multiple biotech and pharmaceutical companies including Pfizer Inc., Bayer Pharmaceuticals, Astellas Pharma Inc., Janssen - a Johnson & Johnson pharmaceutical company, Incyte Corporation, Pharmacyclics Inc., Juno Therapeutics Inc., Cephalon Inc., Geron Corporation, Agouron Pharmaceuticals (a Pfizer Company), Novo Nordisk Pharmaceuticals Inc., among others.

Executive Officers

Vlad Vitoc, M.D., MBA

Dr. Vitoc is our Chairman of Board, Chief Executive Officer and President. Dr. Vitoc has a broad array of experience across commercial strategic analysis and planning and medical affairs, in which he has 20 years of experience. During that time, Dr. Vitoc has managed and supported over 20 early, launch, and mature stage compounds, which have included targeted therapies and immune therapies across more than 25 tumor types, including colorectal cancer, hepatocellular carcinoma, lung cancer, breast cancer prostate cancer, and renal cell carcinoma. Vlad received an M.D. from the University of Medicine and Pharmacy “Iuliu Hatieganu”, Cluj-Napoca, Romania, and his M.B.A. from the University of South Carolina.

We believe Dr. Vitoc is qualified to serve on our board of directors because he is a founder of the Company and he has significant knowledge and experience in the pharmaceutical industry and in the management and support of compounds targeting various types of cancers.

Sergei M. Gryaznov, Ph.D.

Dr. Gryaznov is our Chief Scientific Officer. Dr. Gryaznov is an internationally recognized scientist and expert in the areas of modern drug discovery and development, oncology, telomerase, immune-regulatory therapeutics, nucleosides, nucleotides, DNA and RNA analogues, lipid and other conjugates, small molecules and nucleic acid based therapeutic agents. Dr. Gryaznov is the co-inventor of a novel telomere-by-telomerase-targeting therapeutic approach to potential cancer treatment and responsible for leading the research team that characterized THIO’s telomere targeting activity, our lead compound in development. Dr. Gryaznov obtained a M.S., with Honors, in Organic Chemistry and a Ph.D. in Chemistry of Natural Products from M.V. Lomonosov Moscow State University. Dr. Gryaznov also completed a post-doctoral fellowship program in Chemistry at Northwestern University in Evanston, IL.

Mihail Obrocea, M.D.

Dr. Obrocea is our Chief Medical Officer. Dr. Obrocea is a hematologist/oncologist with over 20 years' experience in drug development in both academia and the pharmaceutical/biotechnology industry with expertise in the development of cell therapy, cancer vaccines, monoclonal antibodies, and small molecules. Dr. Obrocea's research has been published in oncology peer-reviewed literature, he has co-authored published books related to cancer vaccines and immunology, and he holds several patents in the field of biotechnology. Dr. Obrocea received an M.D. from the Carol Davila University of Medicine & Pharmacy in Bucharest, Romania.

Joseph F. McGuire

Mr. McGuire is our Chief Financial Officer, and he brings over 30 years of experience to MAIA having served as Chief Financial Officer for several privately held and publicly traded companies in the health care, financial services, investment, and manufacturing industries. In these roles, his responsibilities included SEC financial reporting, investor relations, corporate governance, legal and audit liaison, and team building. Most recently, Mr. McGuire was the chief financial officer at Avadim Health, Inc. ("Avadim") from October 2014 to May 2021. Avadim subsequently filed a voluntary petition for protection under Chapter 11 of the U.S. Bankruptcy Code and announced on August 17, 2021, the completion of its court-approved sale of substantially all of its assets to a newly created company and emergence from the reorganization proceedings under Chapter 11. Mr. McGuire began his career with Price Waterhouse, where he was a certified public accountant, and later held management positions with Dean Witter Reynolds and Paine Webber, Inc. Joe received a Bachelor of Science in accounting from the University of Notre Dame.

The collective experience of our leadership team includes involvement in the development, approval and/or commercialization of a number of major oncology drugs, including TARCEVA®, NEXAVAR®, IMBRUVICA®, XTANDI®, NERLYNX®, TREANDA®, TRISENOX®, and ZOMETA®, as well as numerous state-of-the-art development programs, including a telomerase inhibitor (IMETELSTAT®), a new immune oncology platform and agent (Cavrolotimod; AST-008), and novel nucleic acid based siRNA and antisense oligonucleotide therapeutics (NP/NPS-oligos). In addition, our team was involved in the development and approval of:

- BREANZY®, an autologous CD19 chimeric antigen receptor (CAR T) treatment for B-cell lymphomas;
- BESPONSA®, a CD22-directed antibody drug conjugate (ADC) for treatment of B-cell acute lymphoblastic leukemia; and
- IMBRUVICA®, or bruton tyrosine kinase inhibitor ibrutinib, for treatment of chronic lymphocytic leukemia and mantle cell lymphomas.

Non-Employee Directors

Louie Ngar Yee; Director

Ms. Louie has 30 years of service with HSBC Group in a variety of functions, principally with businesses of Global Banking and Markets including investment and securities management, asset management, and global research. She also held key leadership positions within Group Internal Audit of HSBC in Latin America, Asia Pacific, and United Kingdom.

Born and educated in Hong Kong, Ms. Louie joined HSBC as an executive trainee in Hong Kong and became an International Manager of HSBC Group in 1996. Since then, she has taken up different roles in Hong Kong, the Philippines, Indonesia, Taiwan, the United States, the United Kingdom, and Latin America, primarily in key management positions to lead, drive and execute a change agenda in a wide range of management situations including business re-engineering, business turnaround, business downsizing, and business set up.

Prior to her current appointment with MAIA Biotechnology in April 2020, Ms. Louie was the Group Chief Operating Officer of Group Internal Audit of HSBC Group.

We believe Ms. Louie is qualified to serve on our board of directors because she has extensive finance, compliance, and audit experience and expertise.

Ramiro Guerrero J.D., LL.M.; Director

Mr. Guerrero is the Founder and CEO of IMPERIO, Inc., a Chicago and Suburban based Real Estate Investment and Brokerage Organization with over 20 years of business experience. He has also been a Venture Capitalist for the past 10 years aiding entrepreneurs and small businesses in their startup ventures. He received his undergraduate B.S. degree in Business/Management from the University of Illinois, his J.D. at the Universidad Metropolitana de Monterrey in Monterrey, Mexico and an LL.M. (Master of Laws) in International Law from St. Mary's University School of Law in San Antonio, Texas and the University of Innsbruck, Austria.

We believe Mr. Guerrero is qualified to serve on our board of directors because he has extensive entrepreneurial start-up experience and expertise.

Cristian Luput; Director

Mr. Luput is the founder and CEO of Optimus Realty Inc, a full-service real estate company specializing in brokering, managing and developing residential properties in Chicago, with over 15 years of extensive expertise in real estate. Mr. Luput has also successfully completed multiple multimillion dollars real estate partnerships, consolidations, mergers and acquisitions.

He is actively involved and serves in the board of directors of several charitable organizations. Mr. Luput is a graduate of Babes-Bolyai, Cluj-Napoca, in Romania with a major in accounting and Business Administration.

We believe Mr. Luput is qualified to serve on our board of directors because has extensive management and entrepreneurial start-up experience and expertise.

Stan V. Smith Ph.D.; Director

Stan V. Smith, Ph.D., is president of Smith Economics Group, Ltd. in Chicago, providing economic and financial consulting nationwide. Trained at the University of Chicago and specializing in litigation economics, Dr. Smith co-authored the first textbook on the subject of economic damages. Dr. Smith has served as an adjunct professor at the University of Chicago and at DePaul University College of Law where he created the first course in the United States in forensic economics.

We believe Dr. Smith is qualified to serve on our board of directors because has extensive economics, financing, and management experience and expertise.

Laurentiu Vlad; Director

Laurentiu Vlad is a highly successful entrepreneur has started and grown two successful companies, in wholesale and retail as well as the lighting industry. His most recent company, Luminii, is the US market leader in linear lighting, having built projects including One World Trade Center, Uber HQ, Space Needle Seattle, and United Polaris Lounges.

We believe Mr. Vlad is qualified to serve on our board of directors because he has extensive management and entrepreneurial start-up experience and expertise.

Steven Chaouki; Director

Steven M. Chaouki is President, U.S. Markets & Consumer Interactive, overseeing two TransUnion business lines. U.S. Markets provides information and insights to business customers across financial services, insurance, public sector, media and diversified markets. Consumer Interactive provides credit, financial and identity protection services to consumers. He previously held the role of Executive Vice President, Financial Services, responsible for the company's financial services business, which provides solutions to banks, credit unions, capital markets, financial services resellers, auto lenders and other customers. Before joining TransUnion, Mr. Chaouki held roles at HSBC in card/retail services and auto finance. Mr. Chaouki earned an M.B.A. from the University of Chicago Booth School of Business and a bachelor's degree from Boston University.

We believe Mr. Chaouki is qualified to serve on our board of directors because he has extensive management and financial experience and expertise.

Family Relationships

There are no family relationships among any of our officers or directors.

Involvement in Certain Legal Proceedings

To the best of our knowledge, except as set forth above regarding Mr. McGuire, none of our directors or executive officers were involved in any legal proceedings described in Item 401(f) of Regulation S-K in the past ten years.

Board Composition

Our board of directors currently consists of seven members, all of whom are members pursuant to the board composition provisions of our current amended and restated certificate of incorporation and agreements with our stockholders, and who will remain members pursuant to the board composition provisions of our amended and restated certificate of incorporation, as amended.

Our nominating and corporate governance committee and our board of directors may consider a broad range of factors relating to the qualifications and background of board nominees, which may include diversity, which is not only limited to race, gender or national origin. We have no formal policy regarding board diversity. Our nominating and corporate governance committee's and our board of directors' priority in selecting board members is identification of persons who will further the interests of our stockholders through his or her established record of professional accomplishment, the ability to contribute positively to the collaborative culture among board members, knowledge of our business, understanding of the competitive landscape and professional and personal experiences and expertise relevant to our growth strategy. Our directors hold office until their successors have been elected and qualified or until the earlier of their death, resignation or removal. Our amended and restated certificate of incorporation and amended and restated bylaws, each as amended to become effective upon the completion of this offering, also provide that our directors may be removed only for cause by the affirmative vote of the holders of a majority of the votes that all our stockholders would be entitled to cast in an election of directors, and that any vacancy on our board of directors, including a vacancy resulting from an enlargement of our board of directors, may be filled only by vote of a majority of our directors then in office and not by the stockholders, unless the board determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders.

Director Independence. Our board of directors has determined that all members of our board of directors are independent directors, with the exception of Vlad Vitoc, including for purposes of the rules of Nasdaq and relevant federal securities laws and regulations.

Staggered Board. In accordance with the terms of our amended and restated certificate of incorporation and amended and restated bylaws, our board of directors is divided into three staggered classes of directors of the same or nearly the same number and each will be assigned to one of the three classes. At each annual meeting of the stockholders, a class of directors will be elected for a three-year term to succeed the directors of the same class whose terms are then expiring.

The terms of the directors will expire upon the election and qualification of successor directors at the annual meeting of stockholders to be held during the years 2021 for Class II directors, 2022 for Class III directors and 2023 for Class I directors:

- our Class I directors are Louie Ngar Yee and Steven Chaouki;
- our Class II directors are Vlad Vitoc, Ramiro Guerrero and Cristian Luput; and
- our Class III directors are Laurentiu Vlad and Stan Smith.

Our amended and restated certificate of incorporation and amended and restated bylaws, each as amended to become effective upon the completion of this offering, provide that the number of our directors shall be fixed from time to time by a resolution of the majority of our board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class shall consist of one third of our board of directors.

The division of our board of directors into three classes with staggered three-year terms may delay or prevent stockholder efforts to effect a change of our management or a change in control.

Committees of the Board of Directors

Our board of directors has an audit committee, a compensation committee and a nominating and corporate governance committee, each of which have the composition and responsibilities described below. Each of the below committees have a written charter approved by our board of directors, effective upon completion of this offering. Each of the committees will report to our board of directors as such committee deems appropriate and as our board of directors may request. Upon completion of this offering, copies of each charter will be posted on the investor relations section of our website. Members serve on these committees until their resignation or until otherwise determined by our board of directors.

Audit Committee

Our audit committee is comprised of Ms. Louie, Mr. Chaouki and Mr. Vlad, with Ms. Louie serving as chair of the committee. Our board of directors has determined that each member of the audit committee meets the independence requirements of Rule 10A-3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and the applicable Nasdaq rules, and has sufficient knowledge in financial and auditing matters to serve on the audit committee. Each of Mr. Chaouki and Ms. Louie qualifies as an audit committee financial expert under Item 407 of Regulation S-K. We have adopted an audit committee charter, detailing the principal functions of the audit committee, including:

- assisting board oversight of (1) the integrity of our financial statements, (2) our compliance with legal and regulatory requirements, (3) our independent auditor's qualifications and independence, and (4) the performance of our internal audit function and independent auditors; the appointment, compensation, retention, replacement, and oversight of the work of the independent auditors and any other independent registered public accounting firm engaged by us;
- pre-approving all audit and non-audit services to be provided by the independent auditors or any other registered public accounting firm engaged by us, and establishing pre-approval policies and procedures;
- reviewing and discussing with the independent auditors all relationships the auditors have with us in order to evaluate their continued independence;
- setting clear policies for audit partner rotation in compliance with applicable laws and regulations;
- obtaining and reviewing a report, at least annually, from the independent auditors describing (1) the independent auditor's internal quality-control procedures and (2) any material issues raised by the most recent internal quality-control review, or peer review, of the audit firm, or by any inquiry or investigation by governmental or professional authorities, within the preceding five years respecting one or more independent audits carried out by the firm and any steps taken to deal with such issues;
- meeting to review and discuss our annual audited financial statements and quarterly financial statements with management and the independent auditor, including reviewing our specific disclosures under "Management's Discussion and Analysis of Financial Condition and Results of Operations"; reviewing and approving any related party transaction required to be disclosed pursuant to Item 404 of Regulation S-K promulgated by the SEC prior to us entering into such transaction; and
- reviewing with management, the independent auditors, and our legal advisors, as appropriate, any legal, regulatory or compliance matters, including any correspondence with regulators or government agencies and any employee complaints or published reports that raise material issues regarding our financial statements or accounting policies and any significant changes in accounting standards or rules promulgated by the Financial Accounting Standards Board, the SEC or other regulatory authorities.

Compensation Committee

Our compensation committee is comprised of Dr. Smith, Mr. Luput and Mr. Guerrero, with Dr. Smith serving as chair of the committee. Each member of this committee is a non-employee director, as defined by Rule 16b-3 promulgated under the Exchange Act. Our board of directors has determined that each member of the compensation committee is "independent" as defined in the applicable Nasdaq rules. The composition of our compensation committee meets the requirements for independence under the Nasdaq listing standards, including the applicable transition rules. We have adopted a compensation committee charter which details the principal functions of the compensation committee, including:

- reviewing and approving on an annual basis the corporate goals and objectives relevant to our Chief Executive Officer's compensation, evaluating our Chief Executive Officer's performance in light of such goals and objectives and determining and approving the remuneration (if any) of our Chief Executive Officer based on such evaluation;
- reviewing and making recommendations to our Board of Directors with respect to the compensation, and any incentive-compensation and equity-based plans that are subject to board approval of all of our other officers;
- reviewing our executive compensation policies and plans;
- implementing and administering our incentive compensation equity-based remuneration plans; assisting management in complying with our proxy statement and annual report disclosure requirements;
- approving all special perquisites, special cash payments and other special compensation and benefit arrangements for our officers and employees; and
- producing a report on executive compensation to be included in our annual proxy statement; and reviewing, evaluating and recommending changes, if appropriate, to the remuneration for directors.

The charter also provides that the compensation committee may, in its sole discretion, retain or obtain the advice of a compensation consultant, independent legal counsel or other adviser and is directly responsible for the appointment, compensation and oversight of the work of any such adviser. However, before engaging or receiving advice from a compensation consultant, external legal counsel or any other adviser, the compensation committee will consider the independence of each such adviser, including the factors required by the Nasdaq and the SEC.

Nominating and Governance Committee

Our nominating and governance committee is comprised of Ms. Louie, Mr. Luput and Dr. Smith, with Ms. Louie serving as the chair of the committee. We have adopted a nominating and corporate governance committee charter, which details the purpose and responsibilities of the nominating and corporate governance committee, including:

- identifying, screening and reviewing individuals qualified to serve as directors, consistent with criteria approved by the Board of Directors, and recommending to the Board of Directors candidates for nomination for election at the annual meeting of stockholders or to fill vacancies on the Board of Directors;
- developing and recommending to the Board of Directors and overseeing implementation of our corporate governance guidelines;
- coordinating and overseeing the annual self-evaluation of the Board of Directors, its committees, individual directors and management in the governance of the company; and
- reviewing on a regular basis our overall corporate governance and recommending improvements as and when necessary.

The charter also provides that the nominating and corporate governance committee may, in its sole discretion, retain or obtain the advice of, and terminate, any search firm to be used to identify director candidates, and is directly responsible for approving the search firm's fees and other retention terms.

We have not formally established any specific, minimum qualifications that must be met or skills that are necessary for directors to possess. In general, in identifying and evaluating nominees for director, the Board of Directors considers educational background, diversity of professional experience, knowledge of our business, integrity, professional reputation, independence, wisdom, and the ability to represent the best interests of our stockholders.

Leadership Structure and Risk Oversight

Our board of directors does not have a policy regarding the separation of the roles of Chief Executive Officer and Chairman of the board of directors, as our board of directors believes it is in the best interest of the Company to make that determination based on the position and direction of the Company and the membership of the board of directors. Our board of directors has determined that having an employee director serve as Chairman is in the best interest of our stockholders at this time because of the efficiencies achieved in having the role of Chief Executive Officer and Chairman combined, and because the detailed knowledge of our day-to-day operations and business that the Chief Executive Officer possesses greatly enhances the decision-making processes of our board of directors as a whole. Dr. Stan Smith is the lead independent director.

The Chairman of the board of directors and the other members of the board of directors work in concert to provide oversight of our management and affairs. Our board of directors encourages communication among its members and between management and the board of directors to facilitate productive working relationships. Working with the other members of the board of directors, our Chairman also strives to ensure that there is an appropriate balance and focus among key board responsibilities such as strategic development, review of operations and risk oversight.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has at any time during the prior three years been one of our officers or employees. None of our executive officers currently serves, or in the past fiscal year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or compensation committee. For a description of transactions between us and members of our compensation committee and affiliates of such members, see the section titled “Certain Relationships and Related Party Transactions”.

Code of Business Conduct and Ethics

We have adopted a code of business conduct and ethics that applies to all our employees, officers and directors, including those officers responsible for financial reporting, which will be effective upon completion of this offering. Upon the completion of this offering, our code of business conduct and ethics will be available on the investor relations section of our website. We intend to disclose any amendments to the code, or any waivers of its requirements, on our website or in a Current Report on Form 8-K.

EXECUTIVE AND DIRECTOR COMPENSATION

Summary Compensation Table

The following table shows the total compensation paid or accrued during the fiscal years ended December 31, 2021 and 2020, to our Chief Executive Officer and President and our other two most highly-compensated executive officers that were serving as executive officers as of December 31, 2021 (our "named executive officers").

Name and Principal Position	Year	Salary	Bonus[1]	Option Awards[2]	Non-Qualified Deferred Compensation Earnings	All Other Compensation	Total
Vlad Vitoc, M.D. M.B.A.	2021	$ 264,583	$ 172,000	$ 266,068	—	$ —	$ 702,651
Chief Executive Officer and President	2020	$ 75,000	$ 240,000	$ 970,971	—	$ 125,000	$ 1,410,971
Joseph F. McGuire[3]	2021	$ 112,500	$ 39,519	$ 700,258	—	$ 26,035	$ 878,312
Chief Financial Officer	2020	$ —	$ —	$ —	—	$ —	$ —
Mihail Obrocea[4]	2021	$ 162,500	$ 57,731	$ 1,907,411	—	$ 18,344	$ 2,145,986
Chief Medical Officer	2020	$ —	$ —	$ —	—	$ —	$ —

(1) All of the bonuses earned by our named executive officers in 2021 are expected to be paid in cash in 2022. The bonus earned by Vlad Vitoc in 2020 was paid out by the issuance of 219,550 stock options on April 16, 2021 to Dr. Vitoc in lieu of payment of a cash bonus.
(2) The aggregate grant date fair value of such awards were computed in accordance with Financial Accounting Standards Board ASC Topic 718, Stock Compensation (ASC Topic 718), and do not take into account estimated forfeitures related to service-based vesting conditions, if any. The valuation assumptions used in calculating these values are discussed in Note 7 of the Notes to Consolidated Financial Statements appearing elsewhere herein. These amounts do not represent actual amounts paid or to be realized. Amounts shown are not necessarily indicative of values to be achieved, which may be more or less than the amounts shown as awards may subject to time-based vesting.
(3) Mr. McGuire served as the CFO of the Company since August 16, 2021, and from July 1, 2021 through August 15, 2021, Mr. McGuire served as a consultant to the Company.
(4) Dr. Obrocea served as the Chief Medical Officer of the Company since July 12, 2021, and from December 1, 2020 through July 11, 2021, Dr. Obrocea served as a consultant to the Company.

Employment Agreements

In August 2021, we entered into executive employment agreements with each of senior executive officers in connection with their employment with us, the material terms of which are described below. Except as noted below, these executive employment agreements provide for "at will" employment.

Summary of Employment Agreement with Vlad Vitoc

Under the terms of Dr. Vitoc's employment agreement dated August 2, 2021, Dr. Vitoc is entitled to an initial annual base salary of $430,000. Dr. Vitoc may be eligible to receive an annual cash bonus of up to 40% of his then-current base salary based on the achievement of certain individual and corporate performance metrics and milestones in the previous year, as determined in the sole discretion of our board of directors. Dr. Vitoc may also be eligible for a discretionary annual performance incentive options award based on the previous year's performance, as determined in the discretion of the board of directors. Dr. Vitoc is eligible to participate in regular health insurance and other employee benefit plans as established by the Company.

This agreement also provides for the following severance payments and benefits upon termination by us without Cause (as defined below): (i) all accrued and unpaid base salary payable and accrued and unpaid deferred compensation earned as of the date of termination; (ii) any bonus or other such compensation earned and payable pursuant to any compensation program then in effect; (iii) reimbursement for all incurred but unreimbursed reasonable and necessary business expenses for which he is entitled to reimbursement, for which proper claims are

made within 45 days of termination; (iv) the benefit of any options vested as of the termination date; and (v) a severance payment equal to the base salary and benefits he otherwise would have received for the one year following the termination, payable as salary continuation in accordance with the Company's normal payroll practices.

In addition, in consideration of the payments and benefits provided under his employment agreement, Dr. Vitoc has agreed to certain invention assignment, confidentiality and other restrictive covenants pursuant to an Employee Invention Assignment, Confidentiality and Non-Competition Agreement, including, among other things, non-competition and non-solicitation provisions that apply during the term of Dr. Vitoc's employment and for one year thereafter.

"Cause" means: (i) conviction of or plea of nolo contendere to a felony or a crime involving moral turpitude; (ii) engaging in an act of gross negligence or willful misconduct in the performance of his employment obligations and duties; (iii) committing an act of fraud against, or material misconduct or willful misappropriation of property belonging to the Company or its subsidiaries or affiliates; (iv) engaging in any other misconduct that has had or will have an adverse effect on the Company's or its subsidiaries or affiliates reputation or business; or (v) his material breach of the Employee Invention Assignment, Confidentiality and Non-Competition Agreement or other unauthorized misuse of the Company's or any of or its subsidiaries or other affiliates' trade secrets or proprietary information.

Summary of Employment Agreement with Mihail Obrocea

Under the terms of Dr. Obrocea's employment agreement dated August 2, 2021, Dr. Obrocea is entitled to an initial annual base salary of $380,000. Dr. Obrocea may be eligible to receive an annual bonus of up to 35% of his then-current base salary based on the achievement of certain individual and corporate performance metrics and milestones in the previous year, as determined in the sole discretion of our board of directors. Dr. Obrocea may also be eligible for a discretionary annual performance incentive options award based on the previous year's performance, as determined in the discretion of the board of directors. Dr. Obrocea is eligible to participate in regular health insurance and other employee benefit plans as established by the Company. This agreement also provides for severance payments and benefits upon termination by us without Cause (as defined above) as described above in the summary of Dr. Vitoc's agreement.

In addition, in consideration of the payments and benefits provided under his employment agreement, Dr. Obrocea has agreed to certain invention assignment, confidentiality and other restrictive covenants pursuant to an Employee Invention Assignment, Confidentiality and Non-Competition Agreement, including, among other things, non-competition and non-solicitation provisions that apply during the term of Dr. Obrocea's employment and for one year thereafter.

Summary of Employment Agreement with Joseph F. McGuire

Under the terms of Mr. McGuire's employment agreement dated August 10, 2021, Mr. McGuire is entitled to an initial annual base salary of $300,000. Mr. McGuire also received a sign-on grant of 130,000 stock options, which will vest over a four year period according to the following schedule: 25% of the shares will vest as of the one-year anniversary of the vesting commencement date and 1/48th of the shares will vest monthly thereafter, so long as Mr. McGuire remains in continuous service with the Company through the applicable vesting dates. Mr. McGuire may be eligible to receive an annual bonus of up to 35% of his then-current base salary based on the achievement of certain individual and corporate performance metrics and milestones in the previous year, as determined in the sole discretion of our board of directors. Starting in 2022, Mr. McGuire may also be eligible for a discretionary annual performance incentive options award based on the previous year's performance, as determined in the discretion of the board of directors. Mr. McGuire is eligible to participate in regular health insurance and other employee benefit plans as established by the Company. This agreement also provides for severance payments and benefits upon termination by us without Cause (as defined above) as described above in the summary of Dr. Vitoc's agreement, with the additional requirement that prior to receiving such payments and benefits Mr. McGuire will be required to sign and not revoke a separation agreement and general release of claims in a form reasonably satisfactory to the Company by no later than the sixtieth (60th) day after his employment termination date.

In addition, in consideration of the payments and benefits provided under his employment agreement, Mr. McGuire has agreed to certain invention assignment, confidentiality and other restrictive covenants pursuant to an Employee Invention Assignment, Confidentiality and Non-Competition Agreement, including, among other things, non-competition and non-solicitation provisions that apply during the term of Mr. McGuire's employment and for one year thereafter.

Outstanding Equity Awards as of December 31, 2021

The following table presents the outstanding equity incentive plan awards held by each named executive officer as of December 31, 2021.

	Option Awards(1)					Stock Awards	
Name	Grant Date	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price Per Share ($)(2)	Option Expiration Date	Number of Shares or Units of Stock that Have Not Vested	Market Value of Shares of Units of Stock that Have Not Vested(3)
Vlad Vitoc	7/1/2021	7,529	—	$ 1.83		—	—
	4/16/2021	509,906	—	$ 1.83		—	—
	4/1/2021	23,078	—	$ 1.83		—	—
	11/3/2020	705,789	—	$ 1.80		—	—
	4/1/2020	169,500	—	$ 1.80		—	—
	6/17/2019	20,500	—	$ 1.80		—	—
	10/1/2018	498,750	145,834	$ 1.80		—	—
Joseph McGuire	8/31/2021	1,297	—	$ 8.00		—	—
	8/16/2021	—	130,000	$ 8.00		—	—
	7/30/2021	656	—	$ 8.00		—	—
Mihail Obrocea	7/31/2021	772	—	$ 8.00		—	—
	7/15/2021	—	260,000	$ 1.83		—	—
	6/7/2021	7,447	—	$ 1.83		—	—
	6/5/2021	6,476	—	$ 1.83		—	—
	4/16/2021	10,022	—	$ 1.83		—	—
	1/31/2021	6,131	—	$ 1.80		—	—
	1/6/2021	13,269	—	$ 1.80		—	—

(1) All of the option awards were granted under the 2018 Plan or the 2020 Plan, the terms of which are described below under "—Equity Compensation Plans and Other Benefit Plans—2020 Employee, Director and Consultant Equity Incentive Plan."

Equity Compensation Plans and Other Benefit Plans

2020 Employee, Director and Consultant Equity Incentive Plan

On September 14, 2018, we adopted and approved the 2018 Stock Option Plan (the "2018 Plan"), which provides for the issuance of 3,900,000 shares of our common stock for purposes of attracting, retaining, and motivating key employees, directors, and consultants. On May 29, 2020, we amended the 2018 Plan and approved it as the Amended and Restated 2020 Equity Incentive Plan (the "2020 Plan") and reserved 1,671,000 common stock for issuance. On November 1, 2020, we approved the second amendment of the 2020 Plan to reserve a total of 3,171,000 common stock for issuance. In April and July of 2021 there were amendments to the 2020 Plan to bring the plan to a total of 4,171,000 shares reserved for issuance. The 2020 Plan provides for the grant of incentive stock options, nonqualified stock options, restricted stock and restricted stock units. As of the date of this prospectus, we have granted an aggregate of options to various key employees, directors, and consultants under the 2020

Plan. As of the date of this prospectus, there are shares available to be granted under the 2020 Plan. On or prior to the consummation of this offering, we intend to cancel the 2020 Plan and convert these stock options to the 2021 Plan, as more fully described below.

2021 Equity Incentive Plan

Our Board of Directors and stockholders have adopted and approved the 2021 Equity Incentive Plan (the "2021 Plan"), which has replaced the 2020 Plan. The 2021 Plan is a comprehensive incentive compensation plan under which we can grant equity-based and other incentive awards to our officers, employees, directors, consultants and advisers. The purpose of the 2021 Plan is to help us attract, retain, and motivate such persons with awards under the 2021 Plan and thereby enhance shareholder value.

Administration. The 2021 Plan is administered by the Board, and upon consummation of this offering will be administered by the compensation committee of the Board, which shall consist of three members of the board, each of whom is a "non-employee director" within the meaning of Rule 16b-3 promulgated under the Exchange Act and "independent" for purposes of any applicable listing requirements. If a member of the compensation committee is eligible to receive an award under the 2021 Plan, such compensation committee member shall have no authority under the plan with respect to his or her own award. Among other things, the compensation committee has complete discretion, subject to the express limits of the 2021 Plan, to determine the directors, employees and nonemployee consultants to be granted an award, the type of award to be granted the terms and conditions of the award, the form of payment to be made and/or the number of shares of common stock subject to each award, the exercise price of each option and base price of each stock appreciation right ("SAR"), the term of each award, the vesting schedule for an award, whether to accelerate vesting, the value of the common stock underlying the award, and the required withholding, if any. The compensation committee may amend, modify or terminate any outstanding award, provided that the participant's consent to such action is required if the action would impair the participant's rights or entitlements with respect to that award. The compensation committee is also authorized to construe the award agreements, and may prescribe rules relating to the 2021 Plan. Notwithstanding the foregoing, the compensation committee does not have any authority to grant or modify an award under the 2021 Plan with terms or conditions that would cause the grant, vesting or exercise thereof to be considered nonqualified "deferred compensation" subject to Code Section 409A, unless such award is structured to be exempt from or comply with all requirements of Code Section 409A.

Grant of Awards; Shares Available for Awards. The 2021 Plan provides for the grant of stock options, SARs, performance share awards, performance unit awards, distribution equivalent right awards, restricted stock awards, restricted stock unit awards and unrestricted stock awards to non-employee directors, officers, employees and nonemployee consultants of MAIA or its affiliates. The aggregate number of shares of common stock reserved and available for grant and issuance under the 2021 Plan is , plus any reserved shares of common stock not issued or subject to outstanding awards granted under the 2020 Plan. The same number of shares of common stock in the aggregate may be issued under the 2021 Plan in connection with incentive stock options. Shares shall be deemed to have been issued under the 2021 Plan solely to the extent actually issued and delivered pursuant to an award. If any award granted under the 2020 Plan or the 2021 Plan expires, is cancelled, or terminates unexercised or is forfeited, the number of shares subject thereto is again available for grant under the 2021 Plan. The 2021 Plan shall continue in effect, unless sooner terminated, until the tenth (10th) anniversary of the date on which it is adopted by the Board. The Board in its discretion may terminate the 2021 Plan at any time with respect to any shares for which awards have not theretofore been granted; provided, however, that the 2021 Plan's termination shall not materially and adversely impair the rights of a holder, without the consent of the holder, with respect to any award previously granted.

Future new hires and additional non-employee directors and/or consultants would be eligible to participate in the 2021 Plan as well. The number of stock options and/or shares of restricted stock to be granted to executives and directors cannot be determined at this time as the grant of stock options and/or shares of restricted stock is dependent upon various factors such as hiring requirements and job performance.

Stock Options. The 2021 Plan provides for either "incentive stock options" ("ISOs"), which are intended to meet the requirements for special federal income tax treatment under Section 422 of the Code, or "nonqualified stock options" ("NQSOs"). Stock options may be granted on such terms and conditions as the compensation committee may determine, which shall be specified in the option agreement; provided, however, that the per share exercise

price under a stock option may not be less than the fair market value of a share of common stock on the date of grant and the term of the stock option may not exceed 10 years (110% of such value and five years in the case of an ISO granted to an employee who owns (or is deemed to own) more than 10% of the total combined voting power of all classes of capital stock of our Company or a parent or subsidiary of our Company). ISOs may only be granted to employees. In addition, the aggregate fair market value of common stock covered by one or more ISOs (determined at the time of grant), which are exercisable for the first time by an employee during any calendar year may not exceed $100,000. Any excess is treated as a NQSO.

Stock Appreciation Rights. A SAR entitles the participant, upon exercise, to receive an amount, in cash or stock or a combination thereof, equal to the increase in the fair market value of the underlying common stock between the date of grant and the date of exercise. The compensation committee shall set forth in the applicable SAR award agreement the terms and conditions of the SAR, including the base value for the SAR (which shall not be less than the fair market value of a share on the date of grant), the number of shares subject to the SAR and the period during which the SAR may be exercised and any other special rules and/or requirements which the compensation committee imposes on the SAR. No SAR shall be exercisable after the expiration of ten (10) years from the date of grant. SARs may be granted in tandem with, or independently of, stock options granted under the 2021 Plan. A SAR granted in tandem with a stock option (i) is exercisable only at such times, and to the extent, that the related stock option is exercisable in accordance with the procedure for exercise of the related stock option; (ii) terminates upon termination or exercise of the related stock option (likewise, the common stock option granted in tandem with a SAR terminates upon exercise of the SAR); (iii) is transferable only with the related stock option; and (iv) if the related stock option is an ISO, may be exercised only when the value of the stock subject to the stock option exceeds the exercise price of the stock option. A SAR that is not granted in tandem with a stock option is exercisable at such times as the compensation committee may specify.

Performance Shares and Performance Unit Awards. Performance share and performance unit awards entitle the participant to receive cash or shares of common stock upon the attainment of specified performance goals. In the case of performance units, the right to acquire the units is denominated in cash values. The compensation committee shall set forth in the applicable award agreement the performance goals and objectives and the period of time to which such goals and objectives shall apply. If such goals and objectives are achieved, such distribution of shares, or payment in cash, as the case may be, shall be made no later than by the fifteenth (15th) day of the third (3rd) calendar month next following the end of the Company's fiscal year to which such performance goals and objectives relate, unless otherwise structured to comply with Code Section 409A.

Distribution Equivalent Right Awards. A distribution equivalent right award entitles the participant to receive bookkeeping credits, cash payments and/or common stock distributions equal in amount to the distributions that would have been made to the participant had the participant held a specified number of shares of common stock during the period the participant held the distribution equivalent right. A distribution equivalent right may be awarded as a component of another award (but not an option or SAR award) under the 2021 Plan, where, if so awarded, such distribution equivalent right will expire or be forfeited by the participant under the same conditions as under such other award. The compensation committee shall set forth in the applicable distribution equivalent rights award agreement the terms and conditions, if any, including whether the holder is to receive credits currently in cash, is to have such credits reinvested (at fair market value determined as of the date of reinvestment) in additional ordinary shares, or is to be entitled to choose among such alternatives.

Restricted Stock Awards. A restricted stock award is a grant or sale of common stock to the holder, subject to such restrictions on transferability, risk of forfeiture and other restrictions, if any, as the compensation committee or the board of directors 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 instalments or otherwise, as the compensation committee or the board of directors may determine at the date of grant or purchase or thereafter. If provided for under the restricted stock award agreement, a participant who is granted or has purchased restricted stock shall have all of the rights of a shareholder, including the right to vote the restricted stock and the right to receive dividends thereon (subject to any mandatory reinvestment or other requirement imposed by the compensation committee or the board of directors or in the award agreement). During the restricted period applicable to the restricted stock, subject to certain exceptions, the restricted stock may not be sold, transferred, pledged, exchanged, hypothecated, or otherwise disposed of by the participant.

Restricted Stock Unit Awards. A restricted stock unit award provides for a grant of shares or a cash payment to be made to the holder upon the satisfaction of predetermined individual service-related vesting requirements, based on the number of units awarded to the holder. The compensation committee shall set forth in the applicable restricted

stock unit award agreement the individual service-based vesting requirements which the holder would be required to satisfy before the holder would become entitled to payment and the number of units awarded to the holder. The holder of a restricted stock unit shall be entitled to receive either a cash payment equal to the fair market value of a share of common stock or a distribution of one share of common stock, as determined in the sole discretion of the compensation committee and as set forth in the restricted stock unit award agreement, for each restricted stock unit subject to such restricted stock unit award, if and to the extent the holder satisfies the applicable vesting requirements. Such payment or distribution shall be made no later than by the fifteenth (15th) day of the third (3rd) calendar month next following the end of the calendar year in which the restricted stock unit first becomes vested, unless otherwise structured to comply with Code Section 409A. A restricted stock unit shall not constitute an equity interest in the Company and shall not entitle the holder to voting rights, dividends or any other rights associated with ownership of shares of our common stock prior to the time the holder shall receive a distribution of shares, if any.

Unrestricted Stock Awards. An unrestricted stock award is a grant or sale of shares of our common stock to the employees, non-employee directors or non-employee consultants that are not subject to transfer, forfeiture or other restrictions, in consideration for past services rendered to the Company or an affiliate or for other valid consideration.

Change-in-Control Provisions. The compensation committee may, in its sole discretion, at the time an award is granted or at any time prior to, coincident with or after the time of a change in control, cause any award either (i) to be cancelled in consideration of a payment in cash or other consideration in amount per share equal to the excess, if any, of the price or implied price per share of common stock in the change in control over the per share exercise, base or purchase price of such award, which may be paid immediately or over the vesting schedule of the award; (ii) to be assumed, or new rights substituted therefore, by the surviving corporation or a parent or subsidiary of such surviving corporation following such change in control; (iii) accelerate any time periods, or waive any other conditions, relating to the vesting, exercise, payment or distribution of an award so that any award to a holder whose employment has been terminated as a result of a change in control may be vested, exercised, paid or distributed in full on or before a date fixed by the compensation committee; (iv) to be purchased from a holder whose employment has been terminated as a result of a change of control, upon the holder's request, for an amount of cash equal to the amount that could have been obtained upon the exercise, payment or distribution of such rights had such award been currently exercisable or payable; or (v) terminate any then outstanding award or make any other adjustment to the awards then outstanding as the compensation committee deems necessary or appropriate to reflect such transaction or change. The number of shares subject to any award shall be rounded to the nearest whole number.

Amendment and Termination. The compensation committee may adopt, amend and rescind rules relating to the administration of the 2021 Plan, and amend, suspend or terminate the 2021 Plan, but no such amendment or termination will be made that materially and adversely impairs the rights of any participant with respect to any award received thereby under the 2021 Plan without the participant's consent, other than amendments that are necessary to permit the granting of awards in compliance with applicable laws.

Certain U.S. Federal Income Tax Consequences of the 2021 Equity Incentive Plan

The following is a general summary of certain U.S. federal income tax consequences under current tax law to the Company (to the extent it is subject to U.S. federal income taxation on its net income) and to participants in the 2021 Plan who are individual citizens or residents of the United States for federal income tax purposes ("U.S. Participants") of stock options which are ISOs, or stock options which are NQSOs, unrestricted stock, restricted stock, restricted stock units, performance stock, performance units, SARs, and dividend equivalent rights. This summary does not purport to cover all of the special rules that may apply, including special rules relating to limitations on our ability to deduct certain compensation, special rules relating to deferred compensation, golden parachutes, U.S. Participants subject to Section 16(b) of the Exchange Act or the exercise of a stock option with previously acquired ordinary shares. This summary assumes that U.S. Participants will hold their shares of common stock as capital assets within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended (the "Code"). In addition, this summary does not address the foreign, state or local or other tax consequences, or any U.S. federal non-income tax consequences, inherent in the acquisition, ownership, vesting, exercise, termination or disposition of an award under the 2021 Plan or shares of common stock issued pursuant thereto. Participants are urged to consult with their own tax advisors concerning the tax consequences to them of an award under the 2021 Plan or shares issued thereunder.

A U.S. Participant generally does not recognize taxable income upon the grant of a NQSO if it is structured to be exempt from or comply with Code Section 409A. Upon the exercise of a NQSO, the U.S. Participant generally recognizes ordinary compensation income in an amount equal to the excess, if any, of the fair market value of the ordinary shares acquired on the date of exercise over the exercise price thereof, and the Company generally will be entitled to a deduction for such amount at that time. If the U.S. Participant later sells ordinary shares acquired pursuant to the exercise of a NQSO, the U.S. Participant recognizes a long-term or short-term capital gain or loss, depending on the period for which the ordinary shares were held. A long-term capital gain is generally subject to more favorable tax treatment than ordinary income or a short-term capital gain. The deductibility of capital losses is subject to certain limitations.

A U.S. Participant generally does not recognize taxable income upon the grant or, except for purposes of the U.S. alternative minimum tax ("AMT") the exercise, of an ISO. For purposes of the AMT, which is payable to the extent it exceeds the U.S. Participant's regular income tax, upon the exercise of an ISO, the excess of the fair market value of the ordinary shares subject to the ISO over the exercise price is a preference item for AMT purposes. If the U.S. Participant disposes of the ordinary shares acquired pursuant to the exercise of an ISO more than two years after the date of grant and more than one year after the transfer of the ordinary shares to the U.S. Participant, the U.S. Participant generally recognizes a long-term capital gain or loss, and the Company will not be entitled to a deduction. However, if the U.S. Participant disposes of such ordinary shares prior to the end of either of the required holding periods, the U.S. Participant will have ordinary compensation income equal to the excess (if any) of the fair market value of such shares on the date of exercise (or, if less, the amount realized on the disposition of such shares) over the exercise price paid for such shares, and the Company generally will be entitled to deduct such amount.

A U.S. Participant generally does not recognize income upon the grant of a SAR. The U.S. Participant recognizes ordinary compensation income upon exercise of the SAR equal to the increase in the value of the underlying shares, and the Company generally will be entitled to a deduction for such amount.

A U.S. Participant generally does not recognize income on the receipt of a performance stock award, performance unit award, restricted stock unit award, unrestricted stock award or dividend equivalent rights award until a cash payment or a distribution of ordinary shares is received thereunder. At such time, the U.S. Participant recognizes ordinary compensation income equal to the excess, if any, of the fair market value of the ordinary shares or the amount of cash received over any amount paid therefor, and the Company generally will be entitled to deduct such amount at such time.

A U.S. Participant who receives a restricted stock award generally recognizes ordinary compensation income equal to the excess, if any, of the fair market value of such ordinary shares at the time the restriction lapses over any amount paid for the ordinary shares. Alternatively, the U.S. Participant may make an election under Section 83(b) of the Code to be taxed on the fair market value of such ordinary shares at the time of grant. The Company generally will be entitled to a deduction at the same time and in the same amount as the income that is required to be included by the U.S. Participant.

401(k) Plan

Our eligible employees will be permitted to participate in our 401(k) beginning January 1, 2022. Participation in the 401(k) plan is offered for the benefit of our employees, including our named executive officers, who remain employed with us, and who satisfy certain eligibility requirements. We plan to match employee contributions using a benchmark to industry standards. Under the 401(k) plan, eligible employees may elect to defer a portion of their compensation, within the limits prescribed by the Code, on a pre-tax or after-tax (Roth) basis, through contributions to the 401(k) plan. The 401(k) plan is intended to qualify under Sections 401(a) and 501(a) of the Code. As a tax-qualified retirement plan, pre-tax contributions to the 401(k) plan and earnings on those pre-tax contributions are not taxable to the employees until distributed from the 401(k) plan, and earnings on Roth contributions are not taxable when distributed from the 401(k) plan.

10b5-1 Plan

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or officer when entering into the plan,

without further direction from the director or officer. The director or officer may amend or terminate the plan in limited circumstances. Our directors and executive officers may also buy or sell additional shares of our common stock outside of a Rule 10b5-1 plan when they are not in possession of material, nonpublic information.

Limitations of Liability and Indemnification Matters

Our amended and restated certificate of incorporation, which will become effective upon completion of the offering, provides that no director of our company shall be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to us or our stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) in respect of unlawful dividend payments or stock redemptions or repurchases, or (iv) for any transaction from which the director derived an improper personal benefit. In addition, our amended and restated certificate of incorporation provides that if the Delaware General Corporation Law ("DGCL") is amended to authorize the further elimination or limitation of the liability of directors, then the liability of a director of our company shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

The amended and restated certificate of incorporation further provides that any repeal or modification of such article by our stockholders or amendment to the DGCL will not affect any right or protection existing at the time of such repeal or modification with respect to any acts or omissions occurring before such repeal or modification of a director serving at the time of such repeal or modification.

Our amended and restated certificate of incorporation also provides 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 whether civil, criminal, administrative or investigative (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, our 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 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 amended and restated certificate of incorporation also provides that we will advance expenses to Indemnitees in connection with a legal proceeding, subject to limited exceptions.

Our amended and restated certificate of incorporation also permits us to secure insurance on behalf of ourselves and any director, officer, employee or agent of the Company or another corporation, partnership joint venture, trust or other enterprise, against any expense, liability or loss incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the Company would have the power to indemnify such person against such expense, liability or loss under the DGCL.

We have entered into separate indemnification agreements with our directors and executive officers, in addition to indemnification provided for in our amended and restated certificate of incorporation, each of which will be in effect upon the completion of this offering. These agreements, among other things, provide for indemnification of our directors and executive officers for expenses, judgments, fines and settlement amounts incurred by them in any action or proceeding arising out of their services as a director or executive officer or at our request. We believe that these provisions in our amended and restated certificate of incorporation and indemnification agreements that will be in effect upon the completion of this offering are necessary to attract and retain qualified persons as directors and executive officers.

The above description of the indemnification provisions of our amended and restated certificate of incorporation and our indemnification agreements, each of which will be in effect upon the completion of this offering is not complete and is qualified in its entirety by reference to these documents, each of which is filed as an exhibit to the registration statement of which this prospectus is a part.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities under the Securities Act may be permitted to directors, officers or persons controlling us 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. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

Non-Employee Director Compensation

Our policy with respect to the compensation payable to our non-employee directors provides that each non-employee director will be eligible to receive compensation for his or her service consisting solely of equity awards, specifically 18,000 stock options per year, of which 1,500 will vest for each month of service. Non-employee directors that serve as chair of audit committee, compensation committee and nominating and corporate governance committee receive an additional 5,000 stock options per year, of which 417 will vest for each month of service.

Directors may be reimbursed for travel, food, lodging and other expenses directly related to their service as directors. Directors will also be entitled to the protection provided by their indemnification agreements and the indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon the completion of this offering.

The employment agreements for the Director who is a full-time employee expressly provides that his service on the Board does not entitle him to any additional compensation. The following table shows the total compensation paid or accrued to sitting non-employee members of our Board of Directors for the fiscal year ended December 31, 2021.

Name	Fees earned or paid in cash	Stock awards		Option awards (1)		All Other Compensation	Total
Tze-Liang Chiam(2)*	$ —	$ 13,750	(5)	$ —	(5)	—	$ 13,750
Charlotte Tsou(3)*	$ —	$ —	(6)	$ 11,414	(6)	—	$ 11,414
Steven Chaouki(4)	$ —	$ —	(7)	$ 105,645	(7)	—	$ 105,645
Ramiro Guerrero	$ —	$ —	(8)	$ 91,217	(8)	—	$ 91,217
Louie Ngar Yee	$ —	$ —	(9)	$ 141,893	(9)	—	$ 141,893
Cristian Luput	$ —	$ 13,750	(10)	$ 91,217	(10)	—	$ 104,967
Stan V. Smith	$ —	$ —	(11)	$ 121,763	(11)	—	$ 121,763
Laurentiu Vlad	$ —	$ —	(12)	$ 91,217	(12)	—	$ 91,217
Leigh-Ann Durant(13)*	$ —	$ —		$ —		—	$ —
Wayne Klohs(14)*	$ —	$ —		$ —		—	$ —

(1) The aggregate grant date fair value of such awards were computed in accordance with Financial Accounting Standards Board ASC Topic 718, Stock Compensation (ASC Topic 718), and do not take into account estimated forfeitures related to service-based vesting conditions, if any. The valuation assumptions used in calculating these values are discussed in Note 7 of the Notes to Consolidated Financial Statements appearing elsewhere herein. These amounts do not represent actual amounts paid or to be realized. Amounts shown are not necessarily indicative of values to be achieved, which may be more or less than the amounts shown as awards may subject to time-based vesting.
(2) Tze-Liang Chiam's term as a director ended on September 15, 2021.
(3) Charlotte Tsou's term as a director ended on November 15, 2021.
(4) Steven Chaouki was appointed as a director on September 15, 2021
(5) Tze-Liang Chiam had 24,306 shares and 18,000 total options outstanding as of December 31, 2021.

(6) Charlotte Tsou had 0 shares and 28,159 total options outstanding as of December 31, 2021.
(7) Steven Chaouki had 0 shares and 21,000 total options outstanding as of December 31, 2021.
(8) Ramiro Guerrero had 33,334 shares and 36,000 total options outstanding as of December 31, 2021.
(9) Louie Ngar Yee had 11,111 shares and 46,000 total options outstanding as of December 31, 2021.
(10) Cristian Luput had 24,306 shares and 36,000 total options outstanding as of December 31, 2021.
(11) Stan V. Smith had 33,334 shares and 97,722 total options outstanding as of December 31, 2021.
(12) Laurentiu Vlad had 33,334 shares and 33,000 total options outstanding as of December 31, 2021.
(13) Leigh-Ann Durant's term as a director ended on November 15, 2021.
(14) Wayne Klohs term as a director ended on January 15, 2021.

*Received compensation for service on the board in 2021 but did not sit on the Board as of December 31, 2021.

PRINCIPAL STOCKHOLDERS

Based solely upon information made available to us, the following table sets forth information as of March 24, 2022 regarding the beneficial ownership of our common stock by:

- each person known by us to be the beneficial owner of more than 5% of our outstanding shares of common stock;
- each of our named executive officers and directors; and
- all our executive officers and directors as a group.

The percentage ownership information shown in the table is based upon 7,936,320 shares of common stock outstanding as of March 24, 2022.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. Except as otherwise indicated, each person or entity named in the table has sole voting and investment power with respect to all shares of our capital shown as beneficially owned, subject to applicable community property laws.

In computing the number and percentage of shares beneficially owned by a person as of a particular date, shares that may be acquired by such person (for example, upon the exercise of options or warrants) within 60 days of such date are counted as outstanding, while these shares are not counted as outstanding for computing the percentage ownership of any other person.

The address of each holder listed below, except as otherwise indicated, is c/o MAIA Biotechnology, Inc., 444 West Lake Street, Suite 1700, Chicago, IL 60606.

			Percentage of Beneficial Ownership	
Name and Address of Beneficial Owner	**Number of Common Shares of Beneficial Ownership Prior to the Offering(1)**		**Prior to Offering**	**After Offering**
Vlad Vitoc	2,900,956	(2)	28.85%	%
Joseph F. McGuire	1,953	(3)	*	*
Sergei M. Gryaznov	889,603	(4)	10.10%	%
Louie Ngar Yee	1,026,876	(5)	12.75%	%
Mihail Obrocea	90,703	(6)	1.13%	*
Ramiro Guerrero	289,961	(7)	3.64%	%
Steven Chaouki	53,250	(8)	*	*
Cristian Luput	313,131	(9)	3.93%	%
Stan V. Smith	669,594	(10)	8.16%	%
Laurentiu Vlad	405,398	(11)	5.09%	%
All directors and executive officers as a group (10 persons):	6,641,425		73.65%	%
Five Percent Shareholders				
Frank Perabo	492,544	(12)	6.21%	%
Jerry Shay	705,000	(13)	8.88%	%

* Less than 1%

(1) Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. In accordance with SEC rules, shares of common stock issuable upon the exercise of options or warrants which are currently exercisable or which become exercisable within 60 days following the date of the information in this table are deemed to be beneficially

owned by, and outstanding with respect to, the holder of such option or warrant, however none of the persons listed hereinabove has the right to acquire beneficial ownership in any other shares of the Company. Subject to community property laws where applicable, to our knowledge, each person listed is believed to have sole voting and investment power with respect to all shares of common stock owned by such person.

(2) Mr. Vitoc beneficially owns (i) 783,121 shares of common stock and (ii) 2,117,835 shares of common stock issuable upon the conversion of options and warrants exercisable within 60 days of March 24, 2022.

(3) Mr. McGuire beneficially owns 1,953 shares of common stock issuable upon the conversion of options exercisable within 60 days of March 24, 2022.

(4) Mr. Gryaznov beneficially owns (i) 21,511 shares of common stock and (ii) 868,092 shares of common stock issuable upon the conversion of options exercisable within 60 days of March 24, 2022.

(5) Ms. Yee beneficially owns (i) 908,584 shares of common and (ii) 118,292 shares of common stock issuable upon the conversion of options and warrants exercisable within 60 days of March 24, 2022.

(6) Mr. Obrocea beneficially owns (i) 26,100 shares of common stock and (ii) 64,603 shares of common stock issuable upon the conversion of options and warrants exercisable within 60 days of March 24, 2022.

(7) Mr. Guerrero beneficially owns (i) 259,382 shares of common stock and (ii) 30,579 shares of common stock issuable upon the conversion of options and warrants exercisable within 60 days of March 24, 2022.

(8) Mr. Chaouki beneficially owns (i) 41,250 shares of common stock and (ii) 12,000 shares of common stock issuable upon the conversion of options exercisable within 60 days of March 24, 2022.

(9) Mr. Luput beneficially owns (i) 277,568 shares of common stock and (ii) 35,563 shares of common stock issuable upon the conversion of options and warrants exercisable within 60 days of March 24, 2022.

(10) Mr. Smith beneficially owns, through The Stan V. Smith Trust Dated 1993, (i) 401,128 shares of common stock and (ii) 268,466 shares of common stock issuable upon the conversion of options and warrants exercisable within 60 days of March 24, 2022.

(11) Mr. Vlad beneficially owns (i) 371,933 shares of common stock and (ii) 33,465 shares of common stock issuable upon the conversion of options and warrants exercisable within 60 days of March 24, 2022.

(12) Mr. Perabo beneficially owns 492,544 shares of common stock.

(13) Mr. Shay beneficially owns (i) 700,000 shares of common stock and (ii) 5,000 shares of common stock issuable upon the conversion of options exercisable within 60 days of March 24, 2022.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since January 1, 2020, to which we have been a party in which the amount involved exceeded or will exceed the lesser of $120,000 or one percent of the average of our total assets as of December 31, 2021 and 2020, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock 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."

Related Party Agreements in Effect Prior to this Offering

Consulting Services

Wayne Klohs is a shareholder and former member of the board of directors who also provided consulting services to the Company. During the year ended December 31, 2020, the Company incurred a total of $20,400 to Mr. Klohs for consulting services.

The Company did not receive consulting services from Mr. Klohs during the year ended December 31, 2021.

Leigh-Ann Durant, a former member of the Company's board of directors prior to her stepping down in November 2021, provides consulting services to the Company for which the Company incurred $129,171 for services provided during the year ended December 31, 2020, $53,981 of which is stock-based compensation which consist of options to purchase 47,569 shares of MAIA common stock.

The Company incurred $88,994 for consulting services provided by Ms. Durant during the year ended December 31, 2021. The Company paid Ms. Durant $34,560 in cash, and issued her options to purchase 23,964 shares of MAIA common stock with a total fair value of $54,434 during the year ended December 31, 2021.

Mukesh Nyati was a minority shareholder of DGD and a consultant who received 222,500 shares of restricted stock in DGD during the year ended December 31, 2020, for his services along with cash. During 2020, the Company incurred $152,576 in research fees, $75,000 of which is stock-based compensation.

Dr. Nyati is also the one of the principal researchers at the University of Michigan who was working on the specific compound licensed from the University of Michigan.

Radu Vitoc, a shareholder and brother of the CEO, provides consulting services to the Company for which the Company incurred $4,700 for services provided during the year ended December 31, 2021. The Company paid Mr. Vitoc $2,350 in cash, and issued him options to purchase 184 shares of common stock with a total fair value of $1,100. The remaining $1,250 for services provided in fiscal 2021 will be settled in options for which the Company has not yet issued to Mr. Vitoc as of December 31, 2021. The Company also issued him a convertible note in the amount of $50,000 during April 2021, which was converted into 8,557 shares of common stock on September 30, 2021 at a conversion price of $6.00 per share (See Note 5), and also received 4,278 warrants to purchase shares of common stock at an exercise price of $6.00 per share.

CEO Loan Agreement

In addition, Vlad Vitoc, the Company's chief executive officer, lent the Company a total of $25,000 in August and September of 2018. Since January 1, 2019, the largest aggregate amount of principal outstanding under these loans was $25,000, and the Company has paid $3,633 of principal and no interest to Dr. Vitoc. The Company paid these loans in full on March 3, 2021, by paying principal of $367 and issuing Dr. Vitoc a convertible note in the amount of $21,000, which converted into 3,621 shares of our common stock on September 30, 2021.

Deferred Compensation Agreements

As of December 31, 2021 and December 31, 2020, the Company had $111,271 and $661,058, respectively, of deferred compensation due to certain employees and officers of the Company pursuant to deferred compensation agreements executed during fiscal 2020 and 2019 as part of a non-qualified deferred compensation plan. Pursuant to

the deferred compensation agreements, the employees had deferred a portion of their annual base salary to be paid upon a Qualified Fund Raising. The Qualified Fund Raising was achieved during July 2021. Upon this event, the employees' salaries were increased up to the market rates set forth in their respective agreements, and all amounts were paid to the employees. The remaining deferred compensation balance as of December 31, 2021 relates to amounts incurred for employees who were no longer with the Company as of the payout date.

During the year ended December 31, 2021, the Company accrued $193,379 in deferred compensation. The Company paid $457,749 in cash and issued 268,769 options with a total fair value of $296,264 during the year ended December 31, 2021, to settle a portion of the deferred compensation balance totaling $743,167. The fair value of the options issued in excess of the deferred compensation balance settled totaling $10,846 was recorded as stock-based compensation expense which is presented within general and administrative expenses on the statement of operations for the year ended December 31, 2021.

Accrued Bonus

During the year ended December 31, 2021 and 2020, the Company accrued $384,750 and $780,000, respectively, in bonus expense relating to certain key employees and officers of the Company. On April 16, 2021, the 2020 accrued bonus balance was settled by issuance of 713,536 stock options with a total fair value of $786,531. The fair value of the options issued in excess of the accrued bonus balance totaled $6,531 and was recorded as stock-based compensation expense which is presented within general and administrative expenses on the statement of operations for the for the year ended December 31, 2021.

Indemnification Agreements

We intend to enter into indemnification agreements with each of our executive officers and directors that will be in effect upon the completion of this offering. The indemnification agreements will provide the executive officers and directors with contractual rights to indemnification, expense advancement and reimbursement, to the fullest extent permitted under the DGCL, subject to certain exceptions contained in those agreements.

Policies and Procedures for Related Person Transactions

Our board of directors will adopt a written related person transaction policy, to be effective upon the closing of this offering, setting forth the policies and procedures for the review and approval or ratification by our audit committee 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 the lesser of $120,000 in any fiscal year or one percent of the average of our total assets as of the two previous fiscal years 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.

DESCRIPTION OF CAPITAL STOCK

The following is a description of (i) the material terms of our amended and restated certificate of incorporation and amended and restated bylaws as they will be in effect upon the consummation of this offering and (ii) certain applicable provisions of Delaware law. We refer you to our amended and restated certificate of incorporation and amended and restated bylaws, copies of which will be filed as exhibits to the registration statement of which this prospectus is a part. In addition, with respect to the description of our warrants, we refer you to the forms of such warrants filed as exhibits to the registration statement of which this prospectus is a part.

Authorized Capitalization

Our authorized capital stock consists of 70 million shares of common stock, par value $0.0001 per share and 30 million shares of preferred stock, par value $0.0001 per share. Following the consummation of this offering, shares of common stock shall be issued and outstanding and no shares of preferred stock shall be issued or outstanding.

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. An election of directors by our stockholders shall be determined by a plurality of the votes cast by the stockholders entitled to vote in the election. Subject to the supermajority votes for some matters, other matters shall be decided by the affirmative vote of our stockholders having a majority in voting power of the votes cast by the stockholders present or represented and voting on such matter. Holders of common stock are entitled to receive proportionately any dividends as may be declared by our board of directors, subject to any preferential dividend rights of any series of preferred stock that we may designate and issue in the future.

In the event of our liquidation or dissolution, the holders of common stock are entitled to receive on a pro rata basis our net assets available for distribution to stockholders after the payment of all debts and other liabilities, subject to the prior rights of any holders of outstanding preferred stock. Holders of common stock have no preemptive, subscription, redemption or conversion rights. Our outstanding shares of common stock are, and the shares offered by us in this offering will be, when issued and paid for, validly issued, fully paid and nonassessable. The rights, preferences and privileges of holders of common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

Under the terms of our amended and restated certificate of incorporation our board of directors is authorized to direct us to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock.

The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of our outstanding voting stock. Upon the closing of this offering, there will be no shares of preferred stock outstanding, and we have no present plans to issue any shares of preferred stock.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Some provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws, each as amended to become effective upon the completion of this offering, will contain provisions that delay, defer, or discourage transactions involving an actual or potential change in control of us or change in our management. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including

transactions which provide for payment of a premium over the market price for our shares. These provisions, summarized below, are intended to discourage coercive takeover practices and 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. We believe that the benefits of the increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital and corporate acquisitions. The existence of authorized but unissued shares of common stock and preferred stock could render more difficult or discourage an attempt to obtain control of a majority of our common stock by means of a proxy contest, tender offer, merger or otherwise.

Stockholder Meetings

Any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide advance notice in writing, and also specify requirements as to the form and content of a stockholder's notice.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the DGCL, which prohibits persons deemed to be "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.

Choice of Forum

The Court of Chancery of the State of Delaware is the exclusive forum in which we and our directors may be sued by our stockholders, to the fullest extent permitted by law, for: any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our certificate of incorporation, or our bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. Our bylaws will not apply to suits brought to enforce a duty or liability created by the Securities Act or the Exchange Act, or any other claim for which federal courts have exclusive jurisdiction. Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. These choice of forum provisions 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, or other employees, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find either choice of forum provision contained in our bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations, and financial condition.

Advance Notice Requirements

Our amended and restated bylaws, as amended to become effective upon the completion of this offering, establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to the board of directors. Stockholders at an annual meeting will only be able to consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the board of directors or by a stockholder who was a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given our Secretary timely written notice, in proper form, of the stockholder's intention to bring that business before the meeting. Although our amended and restated bylaws do not give the board of directors the power to approve or disapprove stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, our bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of us.

Warrants

In connection with the sale of certain shares of our common stock to certain investors in October and November 2019, we issued to each such investors warrants as a buy-one-share, get-one-warrant arrangement. Each warrant is exercisable at an exercise price of $1.80 per share, and expire at the earlier of a change of control, or IPO or seven years from the issuance date. As of March 24, 2022, there are 418,021of these warrants that are currently outstanding and exercisable.

During 2020, we issued warrants to certain consultants for services rendered during the year, 90,000 of these warrants have an exercise price of $1.80 per share and 20,520 of these warrants have an exercise price of $5.00 per share. These warrants expire at various dates through December 2027. As of Mach , 2022, all of these warrants are currently outstanding and exercisable.

Finally, in connection with the sale of certain of our outstanding convertible promissory notes in 2020 and 2021, we issued to each such lender warrants equal to that number of shares of common stock as determined by multiplying the number of shares which would be issuable upon conversion of such note by 50%, for a total of 686,489 warrants at an exercise price of $6.00 per share. These warrants are currently outstanding and expire the earlier of the occurrence of a change of control or September 2028.

Subsequent Event

In January 2022, the Company and certain warrant holders executed waivers related to the acceptance and approval of an amendment to the holders' warrant agreements originally issued between May 6, 2020 and February 26, 2021 in connection with the Company's issuance of convertible notes. The amendment will remove the IPO expiration provision from the warrant agreements, and the warrants shall only be exercisable, in whole or in part, during the exercise period ending on earliest to occur of: (a) various dates in 2028 as stated within the warrant agreements; or (b) immediately prior to the closing of a change of control.

Crossover Round

In the first quarter of 2022, we completed a crossover round with certain investors (the "Crossover Investors") consisting of sales of our common stock at a price of $9.00 per share ("Crossover Price), in the aggregate amount of approximately $2.4 million (the "Crossover Round"). In connection with the Crossover Round, in the event that the price per share of common stock sold in this offering (the "IPO Share Price") is less than the Crossover Price, then we plan to issue to the Crossover Investors, so long as such Crossover Investors continue to hold such common stock, that number of additional shares of our common stock such that the Crossover Price is equal to the IPO Share Price (the "Ratchet Shares").

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Inc. The transfer agent and registrar's address is Computershare Trust Company, N.A.

National Securities Exchange Listing

We have applied to have our shares of common stock listed on the Nasdaq under the symbol "MAIA."

SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there was no public market for our common stock. Future sales of substantial amounts of common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our 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 common stock offered by us in this offering, no exercise of options after , , 2022, and shares of common stock issuable to the Crossover Investors." Of these shares, all shares 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.

The remaining shares of common stock will be "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rules 144 or 701 under the Securities Act, which are summarized below.

Lock-Up Agreements

We, each of our officers, directors, and certain of our stockholders have agreed, subject to certain exceptions, not to sell, offer, agree to sell, contract to sell, hypothecate, pledge, grant any option to purchase, make any short sale of, or otherwise dispose of or hedge, directly or indirectly, any shares of our capital stock or any securities convertible into or exercisable or exchangeable for shares of capital stock, for a period of 180 days after the date of this prospectus, without the prior written consent of the representative. See "Underwriting" for additional information. Following the expiration of the applicable lock-up period, all of the issued and outstanding shares of our common stock will be eligible for future sale, subject to the applicable volume, manner of sale, holding period, and other limitations of Rule 144.

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 common stock for at least six months 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 common stock then outstanding, which will equal approximately shares immediately after this offering; or
- the average weekly trading volume in our common stock on Nasdaq 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

In general, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, 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 nine months 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 under Rule 144(b)(1) 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 an issuer's employees, directors, officers, consultants or advisors who purchases shares from an issuer in connection with a compensatory stock or option plan or other written agreement before the effective date of a registration statement under the Securities Act is entitled to sell such shares 90 days after such effective date in reliance on Rule 144. An affiliate of the issuer 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.

Equity Plans

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of common stock subject to outstanding stock options and common stock issued or issuable under our stock plans. We expect to file the registration statement covering shares offered pursuant to our 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 FOR NON-U.S. HOLDERS

The following summary sets forth below certain material U.S. federal income tax consequences for Non-U.S. Holders (as defined below) of common stock as of the date hereof. This summary is based upon the Internal Revenue Code of 1986, as amended (the "Code"), the regulations promulgated by the U.S. Treasury Department, current administrative interpretations and practices of the U.S. Internal Revenue Service (the "IRS") and judicial decisions, all as currently in effect as of the date hereof and all of which are subject to differing interpretations or change, possibly with retroactive effect. No assurance can be given that the IRS will not assert, or that a court will not sustain a position contrary to any of the tax considerations described below. This summary does not discuss all aspects of U.S. federal income taxation that may be relevant to particular holders in light of their particular circumstances, and does not address the U.S. federal income tax consequences to holders that are subject to special tax rules, including, without limitation: financial institutions, insurance companies, mutual funds, pension plans, S corporations, controlled foreign corporations, broker-dealers, traders in securities that elect mark-to-market treatment, regulated investment companies, real estate investment trusts, partnerships and their partners, tax-exempt organizations (including private foundations), investors that hold common stock as part of a "straddle," "hedge," "conversion," "synthetic security," "constructive ownership transaction," "constructive sale" or other integrated transaction for U.S. federal income tax purposes, holders subject to the alternative minimum tax provisions of the Code, holders who acquired common stock directly or indirectly in connection with performance of services, pursuant to an exercise of employee options, in connection with employee incentive plans or otherwise as compensation, the Sponsor and its affiliates, persons who actually or constructively own 5% or more (by vote or value) of the common stock, persons required to accelerate the recognition of any item of gross income with respect to common stock as a result of such income being recognized on an applicable financial statement, and U.S. expatriates, all of whom may be subject to tax rules that differ materially from those summarized below. In addition, this summary does not discuss any state, local, or non-United States tax considerations, any non-income tax (such as gift or estate tax) considerations, the alternative minimum tax, the Medicare tax on certain net investment income, or any tax reporting obligations in respect of the ownership of common stock. This summary is limited to holders that hold common stock as "capital assets" (generally, property held for investment) under the Code.

If a partnership (including an entity or arrangement treated as a partnership for U.S. federal income tax purposes) holds common stock, the tax treatment of a partner in such partnership will generally depend upon the status of the partner, the activities of the partnership and the partner and certain determinations made at the partner level. If you are a partner of a partnership holding common stock, you are urged to consult your tax advisor.

For purposes of this discussion, a "Non-U.S. Holder" is a beneficial owner for U.S. federal income tax purposes of common stock that is not any of the following:

- an individual who is a United States citizen or resident of the United States;
- a corporation (including an entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate, the income of which is includible in gross income for U.S. federal income tax purposes regardless of its source; or
- a trust (i) the administration of which is subject to the primary supervision of a United States court and which has one or more United States persons (within the meaning of the Code) who have the authority to control all substantial decisions of the trust or (ii) that has in effect a valid election under applicable Treasury regulations to be treated as a United States person.

Gain on Sale, Taxable Exchange, or Other Taxable Disposition of Common Stock

Subject to the discussions below under "—Information Reporting and Backup Withholding" and "— FATCA," a Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax in respect of gain recognized on a taxable disposition of its common stock, unless:

- the gain is effectively connected with the conduct of a trade or business by the Non-U.S. Holder within the United States (and, under certain income tax treaties, is attributable to a United States permanent establishment or fixed base maintained by the Non-U.S. Holder), in which case, a non-corporate Non-U.S. Holder will be subject to tax on the net gain derived from the sale under regular graduated U.S. federal

income tax rates, and a corporate Non-U.S. Holder may be subject to an additional branch profits tax at a 30% rate (or lower rate as may be specified by an applicable income tax treaty);

- the Non-U.S. Holder is an individual who is present in the United States for 183 days or more in the taxable year in which the disposition takes place and certain other conditions are met, in which case the Non-U.S. Holder will generally be subject to a 30% tax on the individual's net capital gain for the year; or
- the Company or has been a "United States real property holding corporation" for U.S. federal income tax purposes at any time during the shorter of the five-year period ending on the date of disposition or the period that the Non-U.S. Holder held common stock, and, in the case where shares of common stock are regularly traded on an established securities market, the Non-U.S. Holder has owned, directly or constructively, more than 5% of the common stock at any time within the shorter of the five-year period preceding the disposition or such Non-U.S. Holder's holding period for the shares of common stock.

With respect to the third bullet point above (if applicable to a particular Non-U.S. Holder), gain recognized by such Non-U.S. Holder on the sale, exchange or other disposition of common stock will be subject to tax at generally applicable U.S. federal income tax rates. There can be no assurance that the common stock will be treated as regularly traded on an established securities market for this purpose. The Company does not believe that it is or has been a United States real property holding corporation for U.S. federal income tax purposes but there can be no assurance in this regard. The Company would be classified as a United States real property holding corporation if the fair market value of its "United States real property interests" equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business, as determined for U.S. federal income tax purposes.

Taxation of Distributions

Subject to the discussions below under "—Information Reporting and Backup Withholding" and "— FATCA," in general, any distributions the Company makes to a Non-U.S. Holder on shares of common stock, to the extent paid out of the Company's current or accumulated earnings and profits (as determined under U.S. federal income tax principles), will constitute dividends for U.S. federal income tax purposes and, provided such dividends are not effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, under certain income tax treaties, attributable to a United States permanent establishment or fixed base maintained by the Non-U.S. Holder), the applicable withholding agent will be required to withhold tax from the gross amount of the dividend at a rate of 30%, unless such Non-U.S. Holder is eligible for a reduced rate of withholding tax under an applicable income tax treaty and provides proper certification of its eligibility for such reduced rate. Any distribution not constituting a dividend will be treated first as reducing (but not below zero) the Non-U.S. Holder's adjusted tax basis in its shares of common stock (and, subject to the discussion below under "—Information Reporting and Backup Withholding" and "— FATCA," and the third bullet point above under "—Gain on Sale, Taxable Exchange or Other Taxable Disposition of common stock," to the extent such distribution does not exceed the adjusted tax basis, such amount will generally not be subject to withholding) and, to the extent such distribution exceeds the Non-U.S. Holder's adjusted tax basis, as gain realized from the sale or other disposition of common stock, which will be treated as described above under "—Gain on Sale, Taxable Exchange or Other Taxable Disposition of Common Stock." In addition, if the Company determines that it is classified as a United States real property holding corporation, it will withhold 15% of any distribution that exceeds the Company's current and accumulated earnings and profits.

Dividends the Company pays to a Non-U.S. Holder that are effectively connected with such Non-U.S. Holder's conduct of a trade or business within the United States (and, under certain income tax treaties, attributable to a United States permanent establishment or fixed base maintained by the Non-U.S. Holder), generally will not be subject to U.S. federal withholding tax, provided such Non-U.S. Holder complies with certain certification and disclosure requirements. Instead, such dividends generally will be subject to U.S. federal income tax, net of certain deductions, at the same graduated individual or corporate rates applicable to United States persons as defined under the Code (subject to an exemption or reduction in such tax as may be provided by an applicable income tax treaty). If the Non-U.S. Holder is a corporation, dividends that are effectively connected income may also be subject to an additional "branch profits tax" at a rate of 30% (or such lower rate as may be specified by an applicable income tax treaty).

Information Reporting and Backup Withholding

The Company generally must report annually to the IRS and to each Non-U.S. Holder the amount of dividends paid to such holder and the tax withheld with respect to such dividends, regardless of whether withholding was required. A Non-U.S. Holder may have to comply with certification procedures to establish that it is not a United States person in order to avoid information reporting and backup withholding requirements. The certification procedures required to claim a reduced rate of withholding under an applicable income tax treaty generally will satisfy a Non-U.S. Holder's certification requirements necessary to avoid backup withholding as well. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules will generally be allowed as a refund or a credit against a Non-U.S. Holders U.S. federal income tax liability provided the required information is timely furnished to the IRS. Holders should consult their tax advisors regarding the application of information reporting and backup withholding to them.

FATCA

Under sections 1471 to 1474 of the Code, commonly referred to as the Foreign Account Tax Compliance Act ("FATCA"), a 30% withholding tax generally applies with respect to certain payments on and, subject to the regulatory relief described below, gross proceeds from a sale or disposition of, common stock if paid to (i) a foreign financial institution (as the beneficial owner or as an intermediary for the beneficial owner), unless such institution (a) enters into, and is in compliance with, a withholding and information reporting agreement with the U.S. government to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which would include certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or (b) is a resident in a country that has entered into an intergovernmental agreement with the United States in relation to such withholding and information reporting and the financial institution complies with the related information reporting requirements of such country or (ii) a foreign entity that is not a financial institution (as the beneficial owner or as an intermediary for the beneficial owner), unless such entity provides the withholding agent with a certification identifying the substantial United States owners of the entity, which generally includes any United States person who directly or indirectly owns more than 10% of the entity, or such entity otherwise qualifies for an exemption from these rules.

An intergovernmental agreement between the United States and the applicable foreign country, or future U.S. Treasury regulations or other guidance, may modify these requirements. Under proposed U.S. Treasury regulations that may be relied upon pending finalization, the withholding tax on gross proceeds would be eliminated and, consequently, FATCA withholding on gross proceeds is not expected to apply unless such proposed U.S. Treasury regulations are modified, withdrawn or replaced in a manner that would subject gross proceeds to FATCA withholding. Non-U.S. Holders should consult their tax advisors regarding the possible implications of such withholding tax.

NON-U.S. HOLDERS OF COMMON STOCK ARE URGED TO CONSULT THEIR TAX ADVISORS CONCERNING THE U.S. FEDERAL, STATE, LOCAL, AND FOREIGN INCOME AND OTHER TAX CONSEQUENCES THEREOF.

UNDERWRITING

ThinkEquity LLC is acting as representative of the underwriters of this offering. Subject to the terms and conditions of an underwriting agreement between us and the representative, we have agreed to sell to each underwriter named below, and each underwriter named below has severally agreed to purchase, at the public offering price less the underwriting discounts set forth on the cover page of this prospectus, the number of shares of common stock listed next to its name in the following table:

Underwriter	Number of Shares
ThinkEquity LLC	
Total	

The underwriters are committed to purchase all shares offered by us other than those covered by the over-allotment option described below, if any are purchased. The obligations of the underwriters may be terminated upon the occurrence of certain events specified in the underwriting agreement. Furthermore, pursuant to the underwriting agreement, the underwriters' obligations are subject to customary conditions, representations and warranties contained in the underwriting agreement, such as receipt by the underwriters of officers' certificates and legal opinions.

The underwriters are offering the shares subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, and other conditions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

The underwriters propose to offer the shares offered by us to the public at the public offering price set forth on the cover of the prospectus. After the shares are released for sale to the public, the underwriters may change the offering price and other selling terms at various times.

Over-Allotment Option

We have granted the underwriters an over-allotment option. This option, which is exercisable for up to 45 days after the date of this prospectus, permits the representative to purchase a maximum of additional shares of common stock (15% of the shares sold in this offering) from us to cover over-allotments, if any. If the representative exercises all or part of this option, it will purchase shares covered by the option at the initial public offering price per share that appears on the cover page of this prospectus, less the underwriting discount. If this option is exercised in full, the total offering price to the public will be $ and the total net proceeds, before expenses, to us will be $.

Discount

The following table shows the initial public offering price, underwriting discounts and proceeds, before expenses, to us. The information assumes either no exercise or full exercise by the underwriters of their over-allotment option.

	Per Share	Total Without Over- Allotment Option	Total With Over- Allotment Option
Initial public offering price	$ —	$ —	$ —
Underwriting discount (7.5%)	$ —	$ —	$ —
Proceeds, before expense, to us	$ —	$ —	$ —

We have agreed to pay a non-accountable expense allowance to the underwriters equal to 1.0% of the gross proceeds received in this offering (excluding proceeds received from exercise of the underwriters' over-allotment option).

We have paid an expense deposit of $35,000 to the representative for out-of-pocket-accountable expenses, which will be returned to us to the extent such out-of-pocket accountable expenses are not actually incurred in accordance with FINRA Rule 5110(f)(2)(C).

In addition, we have agreed to reimburse the representative for (i) fees and expenses of legal counsel to the underwriters in an amount not to exceed $125,000; (ii) fees and expenses related to the use of Ipreo's book building, prospectus tracking and compliance software for the offering in the amount of $29,500; (iii) up to $10,000 for background checks of our officers and directors; (iv) up to $10,000 for all fees, expenses and disbursements relating to the registration, qualification or exemption of such shares under the securities laws of such foreign jurisdictions as the Representative may reasonably designate; (iv) up to $10,000 for all fees, expenses and disbursements relating to the registration, qualification or exemption of such shares under the "blue sky" securities laws of such states, if applicable, and other jurisdictions as the Representative may reasonably designate; (v) $10,000 for data services and communications expenses; (vi) $3,000 for the costs associated with bound volumes of the public offering materials as well as commemorative mementos and lucite tombstones; (vii) up to $10,000 for actual accountable "road show" expenses; and (viii) up to $30,000 for market making and trading, and clearing firm settlement expenses for the offering.

We estimate that the total expenses of the offering payable by us, excluding the total underwriting discount and non-accountable expense allowance, will be approximately $.

Representative's Warrants

We have agreed to issue to the representative or its designees warrants to purchase up to a total of shares of our common stock (5% of the aggregate number of shares of common stock sold in this offering) (the "Representative's Warrants"). The Representative's Warrants will be exercisable at a per share exercise price equal to 125% of the public offering price per share of the shares of common stock sold in this offering. The Representative's Warrants are exercisable at any time, from time to time, in whole or in part, during the four and one half year period commencing six months from the effective date of the registration statement related to this offering.

The Representative's Warrants and the shares of common stock underlying the Representative's Warrants have been deemed compensation by FINRA and are, therefore, subject to a 180-day lock-up pursuant to FINRA Rule 5110(g)(1). The Representative or permitted assignees under such rule may not sell, transfer, assign, pledge, or hypothecate the Representative's Warrants or the securities underlying the Representative's Warrants, nor will the representative engage in any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the Representative's Warrants or the underlying shares of common stock for a period of 180 days from the effective date of the registration statement. Additionally, the Representative's Warrants may not be sold, transferred, assigned, pledged, or hypothecated for a 180-day period following the effective date of the registration statement, except to any underwriter and selected dealer participating in the offering and their bona fide officers or partners. The Representative's Warrants will provide for adjustment in the number and price of the Representative's Warrants and the shares of common stock underlying the Representative's Warrants in the event of recapitalization, merger, stock split, or other structural transaction, or a future financing undertaken by us. The Representative's Warrants will provide for registration rights (including a one-time demand registration right and unlimited piggyback rights) consistent with FINRA Rule 5110.05 and customary anti-dilution provisions (for stock dividends and splits and recapitalizations) consistent with FINRA Rule 5110, and further, the number of shares underlying the Representative's Warrants shall be reduced if necessary to comply with FINRA rules and regulations.

Discretionary Accounts

The underwriters do not intend to confirm sales of the securities offered hereby to any accounts over which they have discretionary authority.

Lock-Up Agreements

Pursuant to certain "lock-up" agreements, we, our executive officers and directors and certain of our stockholders, have agreed not to, without the prior written consent of the representative, offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of or announce the intention to otherwise dispose of, or enter into any swap, hedge or similar agreement or arrangement that transfers, in whole or in part, the economic risk of ownership of,

directly or indirectly, engage in any short selling of any common stock or securities convertible into or exchangeable or exercisable for any common stock, whether currently owned or subsequently acquired, for a period of 180 days from the date of this prospectus.

Right of First Refusal

The Underwriting Agreement will provide that for a period of fifteen (15) months from the closing of the offering, we will grant the representative an irrevocable right of first refusal to act as a sole investment banker, sole book-runner, sole financial advisor, sole underwriter and/or sole placement agent, at the representative's sole discretion, for each and every future public and private equity and debt offering, including all equity linked financings, during such fifteen (15) month period for us, or any successor to or any subsidiary of us, on terms customary to the representative. The representative has the sole right to determine whether or not any other broker dealer shall have the right to participate in any such offering and the economic terms of any such participation.

Indemnification

To the extent permitted by law, we have agreed to indemnify the underwriters and its affiliates, stockholders, directors, officers, employees, members and controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make for these liabilities.

Electronic Offer, Sale and Distribution of Shares

A prospectus in electronic format may be made available on the websites maintained by one or more underwriters or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representative may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' websites is not part of, nor incorporated by reference into, this prospectus or the registration statement of which this prospectus forms a part, has not been approved or endorsed by us or any underwriter in its capacity as underwriter, and should not be relied upon by investors.

Stabilization

In connection with this offering, the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate-covering transactions, penalty bids and purchases to cover positions created by short sales.

Stabilizing transactions permit bids to purchase securities so long as the stabilizing bids do not exceed a specified maximum and are engaged in for the purpose of preventing or retarding a decline in the market price of the securities while the offering is in progress.

Over-allotment transactions involve sales by the underwriters of securities in excess of the number of securities that underwriters are obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position, the number of securities over-allotted by the underwriters is not greater than the number of securities that they may purchase in the over-allotment option. In a naked short position, the number of securities involved is greater than the number of securities in the over-allotment option. The underwriters may close out any short position by exercising their over-allotment option and/or purchasing securities in the open market.

Syndicate covering transactions involve purchases of securities in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of securities to close out the short position, the underwriters will consider, among other things, the price of securities available for purchase in the open market as compared with the price at which they may purchase securities through exercise of the over-allotment option. If the underwriters sell more securities than could be covered by exercise of the over-allotment option and, therefore, have a naked short position, the position can be closed out only by buying securities in the open market. A naked short position is more likely to be created if the underwriters are concerned that after pricing there could be

downward pressure on the price of the securities in the open market that could adversely affect investors who purchase in the offering.

Penalty bids permit the representative to reclaim a selling concession from a syndicate member when the securities originally sold by that syndicate member are purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our securities or preventing or retarding a decline in the market price of our securities. As a result, the price of our securities in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of our securities. These transactions may be effected on the Nasdaq, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

Passive Market Making

In connection with this offering, underwriters and selling group members may engage in passive market making transactions in our common stock on the Nasdaq or on the OTCQB in accordance with Rule 103 of Regulation M under the Exchange Act, during a period before the commencement of offers or sales of the securities and extending through the completion of the distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, then that bid must then be lowered when specified purchase limits are exceeded.

Other Relationships

Certain of the underwriters and their affiliates may provide in the future, various advisory, investment and commercial banking and other services to us in the ordinary course of business, for which they may receive customary fees and commissions. However, we have not yet had, and have no present arrangements with any of the underwriters for any further services.

Offer restrictions outside the United States

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to this offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Australia

This prospectus is not a disclosure document under Chapter 6D of the Australian Corporations Act, has not been lodged with the Australian Securities and Investments Commission and does not purport to include the information required of a disclosure document under Chapter 6D of the Australian Corporations Act. Accordingly, (i) the offer of the securities under this prospectus is only made to persons to whom it is lawful to offer the securities without disclosure under Chapter 6D of the Australian Corporations Act under one or more exemptions set out in section 708 of the Australian Corporations Act, (ii) this prospectus is made available in Australia only to those persons as set forth in clause (i) above, and (iii) the offeree must be sent a notice stating in substance that by accepting this offer, the offeree represents that the offeree is such a person as set forth in clause (i) above, and, unless permitted under the Australian Corporations Act, agrees not to sell or offer for sale within Australia any of the securities sold to the offeree within 12 months after its transfer to the offeree under this prospectus.

China

The information in this document does not constitute a public offer of the securities, whether by way of sale or subscription, in the People's Republic of China (excluding, for purposes of this paragraph, Hong Kong Special

Administrative Region, Macau Special Administrative Region and Taiwan). The securities may not be offered or sold directly or indirectly in the PRC to legal or natural persons other than directly to "qualified domestic institutional investors."

European Economic Area—Belgium, Germany, Luxembourg and Netherlands

The information in this document has been prepared on the basis that all offers of securities will be made pursuant to an exemption under the Directive 2003/71/EC ("Prospectus Directive"), as implemented in Member States of the European Economic Area (each, a "Relevant Member State"), from the requirement to produce a prospectus for offers of securities.

An offer to the public of securities has not been made, and may not be made, in a Relevant Member State except pursuant to one of the following exemptions under the Prospectus Directive as implemented in that Relevant Member State:

- to legal entities that are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- to any legal entity that has two or more of (i) an average of at least 250 employees during its last fiscal year; (ii) a total balance sheet of more than €43,000,000 (as shown on its last annual unconsolidated or consolidated financial statements) and (iii) an annual net turnover of more than €50,000,000 (as shown on its last annual unconsolidated or consolidated financial statements);
- to fewer than 100 natural or legal persons (other than qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive) subject to obtaining the prior consent of the Company or any underwriter for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of securities shall result in a requirement for the publication by the Company of a prospectus pursuant to Article 3 of the Prospectus Directive.

France

This document is not being distributed in the context of a public offering of financial securities (offre au public de titres financiers) in France within the meaning of Article L.411-1 of the French Monetary and Financial Code (Code monétaire et financier) and Articles 211-1 et seq. of the General Regulation of the French Autorité des marchés financiers ("AMF"). The securities have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France.

This document and any other offering material relating to the securities have not been, and will not be, submitted to the AMF for approval in France and, accordingly, may not be distributed or caused to distributed, directly or indirectly, to the public in France.

Such offers, sales and distributions have been and shall only be made in France to (i) qualified investors (investisseurs qualifiés) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2 and D.411-1 to D.411-3, D. 744-1, D.754-1 and D.764-1 of the French Monetary and Financial Code and any implementing regulation and/or (ii) a restricted number of non-qualified investors (cercle restreint d'investisseurs) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2 and D.411-4, D.744-1, D.754-1 and D.764-1 of the French Monetary and Financial Code and any implementing regulation.

Pursuant to Article 211-3 of the General Regulation of the AMF, investors in France are informed that the securities cannot be distributed (directly or indirectly) to the public by the investors otherwise than in accordance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 to L.621-8-3 of the French Monetary and Financial Code.

Ireland

The information in this document does not constitute a prospectus under any Irish laws or regulations and this document has not been filed with or approved by any Irish regulatory authority as the information has not been prepared in the context of a public offering of securities in Ireland within the meaning of the Irish Prospectus (Directive 2003/71/EC) Regulations 2005 (the "Prospectus Regulations"). The securities have not been offered or

sold, and will not be offered, sold or delivered directly or indirectly in Ireland by way of a public offering, except to (i) qualified investors as defined in Regulation 2(l) of the Prospectus Regulations and (ii) fewer than 100 natural or legal persons who are not qualified investors.

Israel

The securities offered by this prospectus have not been approved or disapproved by the Israeli Securities Authority (the ISA), or ISA, nor have such securities been registered for sale in Israel. The shares may not be offered or sold, directly or indirectly, to the public in Israel, absent the publication of a prospectus. The ISA has not issued permits, approvals or licenses in connection with this offering or publishing the prospectus; nor has it authenticated the details included herein, confirmed their reliability or completeness, or rendered an opinion as to the quality of the securities being offered. Any resale in Israel, directly or indirectly, to the public of the securities offered by this prospectus is subject to restrictions on transferability and must be effected only in compliance with the Israeli securities laws and regulations.

Italy

The offering of the securities in the Republic of Italy has not been authorized by the Italian Securities and Exchange Commission (Commissione Nazionale per le Societa e la Borsa, or CONSOB), pursuant to the Italian securities legislation and, accordingly, no offering material relating to the securities may be distributed in Italy and such securities may not be offered or sold in Italy in a public offer within the meaning of Article 1.1(t) of Legislative Decree No. 58 of 24 February 1998 ("Decree No. 58"), other than:

- to Italian qualified investors ("Qualified Investors"), as defined in Article 100 of Decree no. 58 by reference to Article 34-ter of CONSOB Regulation no. 11971 of 14 May 1999, as amended ("Regulation no. 1197l"); and
- in other circumstances that are exempt from the rules on public offer pursuant to Article 100 of Decree No. 58 and Regulation no. 1197l.

Any offer, sale or delivery of the securities or distribution of any offer document relating to the securities in Italy (excluding placements where a Qualified Investor solicits an offer from the issuer) under the paragraphs above must be:

- made by investment firms, banks or financial intermediaries permitted to conduct such activities in Italy in accordance with Legislative Decree No. 385 of 1 September 1993, as amended, Decree No. 58, CONSOB Regulation No. 16190 of 29 October 2007, and any other applicable laws; and
- in compliance with all relevant Italian securities, tax and exchange controls and any other applicable laws.

Any subsequent distribution of the securities in Italy must be made in compliance with the public offer and prospectus requirement rules provided under Decree No. 58 and the Regulation No. 11971 as amended, unless an exception from those rules applies. Failure to comply with such rules may result in the sale of such securities being declared null and void and in the liability of the entity transferring the securities for any damages suffered by the investors.

Japan

The securities have not been and will not be registered under Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948), as amended (the "FIEL") pursuant to an exemption from the registration requirements applicable to a private placement of securities to Qualified Institutional Investors (as defined in and in accordance with Article 2, paragraph 3 of the FIEL and the regulations promulgated thereunder). Accordingly, the securities may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan other than Qualified Institutional Investors. Any Qualified Institutional Investor who acquires securities may not resell them to any person in Japan that is not a Qualified Institutional Investor, and acquisition by any such person of securities is conditional upon the execution of an agreement to that effect.

Portugal

This document is not being distributed in the context of a public offer of financial securities (oferta pública de valores mobiliários) in Portugal, within the meaning of Article 109 of the Portuguese Securities Code (Código dos Valores Mobiliários). The securities have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in Portugal. This document and any other offering material relating to the securities have not been, and will not be, submitted to the Portuguese Securities Market Commission (Comissão do Mercado de Valores Mobiliários) for approval in Portugal and, accordingly, may not be distributed or caused to distributed, directly or indirectly, to the public in Portugal, other than under circumstances that are deemed not to qualify as a public offer under the Portuguese Securities Code. Such offers, sales and distributions of securities in Portugal are limited to persons who are "qualified investors" (as defined in the Portuguese Securities Code). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Sweden

This document has not been, and will not be, registered with or approved by Finansinspektionen (the Swedish Financial Supervisory Authority). Accordingly, this document may not be made available, nor may the securities be offered for sale in Sweden, other than under circumstances that are deemed not to require a prospectus under the Swedish Financial Instruments Trading Act (1991:980) (Sw. lag (1991:980) om handel med finansiella instrument). Any offering of securities in Sweden is limited to persons who are "qualified investors" (as defined in the Financial Instruments Trading Act). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering material relating to the securities may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering material relating to the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority (FINMA).

This document is personal to the recipient only and not for general circulation in Switzerland.

United Arab Emirates

Neither this document nor the securities have been approved, disapproved or passed on in any way by the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates, nor has the Company received authorization or licensing from the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates to market or sell the securities within the United Arab Emirates. This document does not constitute and may not be used for the purpose of an offer or invitation. No services relating to the securities, including the receipt of applications and/or the allotment or redemption of such shares, may be rendered within the United Arab Emirates by the Company.

No offer or invitation to subscribe for securities is valid or permitted in the Dubai International Financial Centre.

United Kingdom

Neither the information in this document nor any other document relating to the offer has been delivered for approval to the Financial Services Authority in the United Kingdom and no prospectus (within the meaning of section 85 of the Financial Services and Markets Act 2000, as amended ("FSMA")) has been published or is intended to be published in respect of the securities. This document is issued on a confidential basis to "qualified

investors" (within the meaning of section 86(7) of FSMA) in the United Kingdom, and the securities may not be offered or sold in the United Kingdom by means of this document, any accompanying letter or any other document, except in circumstances which do not require the publication of a prospectus pursuant to section 86(1) FSMA. This document should not be distributed, published or reproduced, in whole or in part, nor may its contents be disclosed by recipients to any other person in the United Kingdom.

Any invitation or inducement to engage in investment activity (within the meaning of section 21 of FSMA) received in connection with the issue or sale of the securities has only been communicated or caused to be communicated and will only be communicated or caused to be communicated in the United Kingdom in circumstances in which section 21(1) of FSMA does not apply to the Company. In the United Kingdom, this document is being distributed only to, and is directed at, persons (i) who have professional experience in matters relating to investments falling within Article 19(5) (investment professionals) of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005 ("FPO"), (ii) who fall within the categories of persons referred to in Article 49(2)(a) to (d) (high net worth companies, unincorporated associations, etc.) of the FPO or (iii) to whom it may otherwise be lawfully communicated (together "relevant persons"). The investments to which this document relates are available only to, and any invitation, offer or agreement to purchase will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

Canada

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities 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 (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI33-105 regarding underwriter conflicts of interest in connection with this offering.

EXPERTS

The consolidated balance sheets of MAIA Biotechnology, Inc. and Subsidiaries as of December 31, 2021 and 2020, and the related consolidated statements of operations, changes in stockholders' equity (deficit), and cash flows for each of the years then ended, have been audited by EisnerAmper LLP, independent registered public accounting firm, as stated in their report which is incorporated herein. Such financial statements have been incorporated herein in reliance on the report of such firm given upon their authority as experts in accounting and auditing.

LEGAL MATTERS

Loeb & Loeb LLP, New York, New York, will pass upon the validity of the shares of common stock offered hereby. Venable, LLP, New York, New York has acted as counsel for the underwriters in connection with certain legal matters related to this offering.

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 securities offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all the information set forth in the registration statement, some of which is contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and our common stock, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document is not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement is this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. You may read and copy the registration statement, the related exhibits and other material we file with the SEC at the SEC's public reference room in Washington, D.C. at 100 F Street, Room 1580, N.E., Washington, D.C. 20549. You can also request copies of those documents, upon payment of a duplicating fee, by writing to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference rooms. The SEC also maintains an Internet website that contains reports, proxy statements and other information about issuers, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

Upon completion of this offering, we will become subject to the information and reporting requirements of the Securities Exchange Act of 1934, as amended, and, in accordance with this law, will be required to file periodic reports, proxy statements and other information with the SEC. These periodic 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.maiabiotech.com. Our website and the information contained on, or that can be accessed through, our website is not deemed to be incorporated by reference in, and is not considered part of, this prospectus. You should not rely on any such information in making your decision whether to purchase our common stock.

We have not authorized anyone to give you any information or to make any representations about us or the transactions we discuss in this prospectus other than those contained in this prospectus. If you are given any information or representations about these matters that is not discussed in this prospectus, you must not rely on that information. This prospectus is not an offer to sell or a solicitation of an offer to buy securities anywhere or to anyone where or to whom we are not permitted to offer or sell securities under applicable law.

MAIA Biotechnology, Inc. and Subsidiaries
Index to Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
MAIA Biotechnology, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of MAIA Biotechnology, Inc. and Subsidiaries (the "Company") as of December 31, 2021 and 2020, and the related consolidated statements of operations, changes in stockholders' equity (deficit), and cash flows for each of the years then ended, and the related notes (collectively referred to as 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, 2021 and 2020, and the results of its operations and its cash flows for each of 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 the 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/ EisnerAmper LLP

We have served as the Company's auditor since 2021.

EISNERAMPER LLP
Iselin, New Jersey
April 8, 2022

MAIA Biotechnology, Inc. and Subsidiaries
Consolidated Balance Sheets

	December 31, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash	$ 10,574,292	$ 663,457
Prepaid expenses and other current assets	98,203	83,048
Total current assets	10,672,495	746,505
Deferred offering costs	651,582	—
Other assets	3,122	—
Total assets	$ 11,327,199	$ 746,505
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	$ 960,401	$ 154,886
Accrued expenses	1,074,324	838,810
Due to related parties	—	7,037
Convertible notes payable - current portion	—	10,586
Loan payable to officer	—	21,367
Deferred compensation	111,271	661,058
Total current liabilities	2,145,996	1,693,744
Convertible notes payable, net of current portion	—	332,841
Convertible notes payable, related parties	—	98,960
Derivative liability for embedded conversion features on convertible notes payable and convertible notes payable, related parties	—	127,000
Warrant liability	—	85,260
Simple agreement for future equity payable	—	25,000
Total liabilities	2,145,996	2,362,805
Commitments and contingencies		
Stockholders' equity (deficit)		
Preferred stock, $0.0001 par value, 70,000,000 shares authorized, 0 shares issued and outstanding	—	—
Common stock, $0.0001 par value, 30,000,000 shares authorized, 7,584,980 and 4,433,644 shares issued and outstanding at December 31, 2021 and December 31, 2020, respectively	758	443
Additional paid-in capital	37,618,438	12,599,585
Accumulated deficit	(28,437,993)	(15,934,113)
Stock subscription receivable	—	(2,002)
Total MAIA Biotechnology, Inc. stockholders' equity (deficit)	9,181,203	(3,336,087)
Noncontrolling interests	—	1,719,787
Total stockholders' equity (deficit)	9,181,203	(1,616,300)
Total liabilities and stockholders' equity (deficit)	$ 11,327,199	$ 746,505

See the accompanying notes to the consolidated financial statements.

MAIA Biotechnology, Inc. and Subsidiaries
Consolidated Statements of Operations

	For the Year Ended December 31,	
	2021	**2020**
Operating expenses:		
Research and development expenses	$ 3,496,796	$ 1,412,409
General and administrative expenses	4,289,831	5,563,192
Total operating costs and expenses	7,786,627	6,975,601
Loss from operations	(7,786,627)	(6,975,601)
Other income (expense):		
Interest expense	(827,539)	(32,226)
Interest income	2,012	679
Paycheck protection program loan forgiveness	62,500	62,500
Australian research and development incentives	43,666	—
Change in fair value of embedded features	(203,000)	5,000
Change in fair value of warrant liability	(1,546,280)	(19,600)
Loss on extinguishment of convertible notes and convertible notes, related parties	(2,322,943)	—
Other income (expense), net	(4,791,584)	16,353
Net loss	(12,578,211)	(6,959,248)
Net loss attributable to noncontrolling interests	(74,331)	(322,588)
Net loss attributable to MAIA Biotechnology, Inc. shareholders	$ (12,503,880)	$ (6,636,660)
Net loss per share		
Basic and diluted net loss per share	$ (2.37)	$ (1.50)
Weighted average common shares outstanding		
Basic and diluted	5,278,435	4,427,242

See the accompanying notes to the consolidated financial statements.

MAIA Biotechnology, Inc. and Subsidiaries
Consolidated Statements of Changes in Stockholders' Equity (Deficit)

	Common Stock		Additional Paid-In	Accumulated	Subscription	Total MAIA	Noncontrolling	Total Stockholders'
	Shares	Amount	Capital	Deficit	Receivable	Equity (Deficit)	Interest	Equity (Deficit)
Balance at December 31, 2020	4,433,644	$ 443	$ 12,599,585	$ (15,934,113)	$ (2,002)	$ (3,336,087)	$ 1,719,787	$ (1,616,300)
Issuance of common shares upon exercise of stock options	5,000	1	8,999	—	—	9,000	—	9,000
Issuance of common shares upon exercise of warrants	283,616	28	529,397	—	—	529,425	—	529,425
Issuance of restricted common shares	15,278	2	27,498	—	—	27,500	—	27,500
Cancellation of restricted common shares	(5,557)	(1)	—	—	—	(1)	—	(1)
Stock-based compensation expense - MAIA	—	—	2,428,935	—	—	2,428,935	—	2,428,935
Stock-based compensation expense - DGD	—	—	—	—	—	—	161,460	161,460
Stock-based compensation expense - THIO	—	—	—	—	—	—	104,999	104,999
Issuance of stock options to satisfy accrued bonus	—	—	786,531	—	—	786,531	—	786,531
Issuance of stock options to satisfy deferred compensation	—	—	285,418	—	—	285,418	—	285,418
Issuance of common shares upon conversion of convertible notes	1,375,228	138	11,001,136	—	—	11,001,274	—	11,001,274
Issuance of common shares upon conversion of SAFE	5,208	—	25,000	—	—	25,000	—	25,000
Issuance of common shares in connection with Equity Financing	772,563	77	6,180,426	—	(320,000)	5,860,503	—	5,860,503
Receipt of stock subscription receivable	—	—	—	—	322,002	322,002	—	322,002
Transaction costs incurred in connection with Equity Financing	—	—	(118,332)	—	—	(118,332)	—	(118,332)
Reclassification of warrant liability to equity	—	—	1,952,000			1,952,000		1,952,000
Issuance of restricted common shares to founder pursuant to THIO Merger Agreement	700,000	70	(70)	—	—	—	—	—
Dissolution of DGD	—	—	1,098,110	—	—	1,098,110	(1,098,110)	—
Dissolution of THIO pursuant to Merger Agreement	—	—	813,805	—	—	813,805	(813,805)	—
Net loss	—	—	—	(12,503,880)	—	(12,503,880)	(74,331)	(12,578,211)
Balance at December 31, 2021	7,584,980	$ 758	$ 37,618,438	$ (28,437,993)	$ —	$ 9,181,203	$ —	$ 9,181,203

See the accompanying notes to the consolidated financial statements.

MAIA Biotechnology, Inc. and Subsidiaries
Consolidated Statements of Changes in Stockholders' Equity (Deficit)

	Common Stock		Additional Paid-In	Accumulated	Subscription	Total MAIA	Noncontrolling	Total Stockholders'
	Shares	Amount	Capital	Deficit	Receivable	Equity (Deficit)	Interest	Equity (Deficit)
Balance at December 31, 2019	4,416,977	$ 442	$ 9,228,546	$ (9,297,453)	$ (104,402)	$ (172,867)	$ 1,497,659	$ 1,324,792
Receipt of stock subscription receivable - MAIA	—	—	—	—	102,400	102,400	—	102,400
Receipt of stock subscription receivable - DGD	—	—	—	—	—	—	35,000	35,000
Issuance of restricted common shares	16,667	1	19,999	—	—	20,000	—	20,000
Issuance of DGD common stock	—	—	—	—	—	—	50,000	50,000
Stock-based compensation expense - MAIA	—	—	3,351,040	—	—	3,351,040	—	3,351,040
Stock-based compensation expense - DGD	—	—	—	—	—	—	307,928	307,928
Stock-based compensation expense - THIO	—	—	—	—	—	—	210,000	210,000
Return of capital - DGD	—	—	—	—	—	—	(58,212)	(58,212)
Net loss	—	—	—	(6,636,660)	—	(6,636,660)	(322,588)	(6,959,248)
Balance at December 31, 2020	$ 4,433,644	$ 443	$ 12,599,585	$ (15,934,113)	$ (2,002)	$ (3,336,087)	$ 1,719,787	$ (1,616,300)

See the accompanying notes to the consolidated financial statements.

MAIA Biotechnology, Inc. and Subsidiaries
Consolidated Statements of Cash Flows

	For the Year Ended December 31,	
	2021	**2020**
Cash flows from operating activities:		
Net loss, including noncontrolling interests	$ (12,578,211)	$ (6,959,248)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	2,722,893	3,888,968
Loss on extinguishment of convertible notes	2,322,943	—
Gain from forgiveness of Paycheck Protection Program loan	(62,500)	(62,500)
Change in fair value of embedded features	203,000	(5,000)
Change in fair value of warrant liability	1,546,280	19,600
Amortization of debt discount	596,953	19,875
Change in operating assets and liabilities:		
Prepaid expenses and other current assets	(15,155)	(58,084)
Deferred offering costs	(651,582)	—
Other assets	(3,122)	—
Accounts payable	805,516	(2,304)
Accrued expenses	1,261,495	826,470
Due to related parties	(7,037)	4,938
Deferred compensation	(264,369)	483,122
Net cash used in operating activities	(4,122,896)	(1,844,163)
Cash flows from financing activities:		
Proceeds from issuance of convertible notes, warrants, and embedded conversion features	7,369,000	610,000
Proceeds from Paycheck Protection Program loan	62,500	62,500
Collections of subscriptions receivable - MAIA	322,002	102,400
Collections of subscriptions receivable - DGD	—	35,000
Proceeds from issuance of common stock, net of transaction costs - MAIA	5,742,171	—
Proceeds from issuance of common stock - DGD	—	50,000
Proceeds from exercise of stock options	9,000	—
Proceeds from exercise of warrants	529,425	—
Return of capital – DGD	—	(58,212)
Payment on loan payable to officer	(367)	(3,633)
Net cash provided by financing activities	14,033,731	798,055
Net increase (decrease) in cash	9,910,835	(1,046,108)
Cash at beginning of year	663,457	1,709,565
Cash at end of year	$ 10,574,292	$ 663,457
Supplemental disclosure of cash flow information:		
Conversion of convertible notes and accrued interest into MAIA common stock	$ 8,249,587	$ —
Conversion of SAFE into MAIA common stock	$ 25,000	$ —
Options issued for accrued bonus	$ 786,531	$ —
Options issued for deferred compensation	$ 285,418	$ —
Reclassification of warrant liability to equity	$ 1,952,000	$ —
Issuance of convertible note for payment on loan from officer	$ (21,000)	$ —

See the accompanying notes to the consolidated financial statements.

1. NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Business, Organization, and Principles of Consolidation

MAIA Biotechnology, Inc. and Subsidiaries (collectively, "the Company") is a biopharmaceutical company that develops oncology drug candidates to improve and extend the lives of people with cancer. MAIA Biotechnology, Inc. ("MAIA") was incorporated in the state of Delaware on August 3, 2018. These consolidated financial statements include the accounts of MAIA and its subsidiaries, as follows:

- THIO Therapeutics, Inc. ("THIO"), incorporated in the state of Delaware on November 26, 2018. On August 13, 2021, MAIA and THIO completed a plan of reorganization in which THIO merged with and into MAIA. Prior to the merger, MAIA owned 93.3% of the outstanding shares of THIO common stock, which were cancelled in connection with the merger. The remaining 6.7% minority stockholder of THIO received one share of MAIA common stock for each share of THIO common stock owned prior to the merger.
- DGD Pharmaceuticals Corporation ("DGD"), incorporated in the state of Delaware of April 1, 2019. In July 2020, the board of directors approved the dissolution of DGD, and shortly thereafter also approved a special dividend/return of capital to its stockholders. On August 13, 2021, DGD was officially dissolved via a filing of a Certificate of Dissolution with the state of Delaware.
- MAIA Drug Development Corporation ("MAIA DD") incorporated in the state of Texas on September 10, 2018, and was 100% owned by MAIA, until MAIA DD was legally dissolved in July 2021. The operations of MAIA DD were nominal.
- In July 2021, the Company established a wholly owned Australian subsidiary, MAIA Biotechnology Australia Pty Ltd, to conduct various pre-clinical and clinical activities for the development of the Company's product candidates.

Liquidity

At December 31, 2021, the Company had working capital of $8,526,499, an accumulated deficit of $28,437,993, cash of $10,574,292 and current liabilities of $2,145,996. Since inception the Company has experienced net losses and negative cash flows from operations each fiscal year. The Company has no revenues and expects to continue to incur operating losses for the foreseeable future, and may never become profitable. The Company is dependent on its ability to continue to raise equity and/or debt financing to continue operations, and the attainment of profitable operations. During January and February 2022, the Company sold 263,729 shares of common stock at $9 per share for gross proceeds of $2,373,561 before transaction costs and expenses.

The Company believes that it currently has sufficient funds to support operations through the next twelve months from the date the consolidated financial statements are issued, including funding of the THIO-101 lead-in and preliminary efficacy of the phase 2 THIO-101. However, further significant funding will be required to perform the necessary clinical trials, and to meet the Company’s long-term development and commercialization goals. The Company cannot make any assurances that additional financings will be available to it and, if available, on acceptable terms or at all. This could negatively impact the Company’s business and operations and could also lead to the reduction of the Company’s operations.

Impact of the COVID-19 Pandemic on our Operations

On January 30, 2020, the World Health Organization (“WHO”) announced a global health emergency because of a new strain of coronavirus originating in Wuhan, China (the “COVID-19 Outbreak”) and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the WHO classified the COVID-19 Outbreak as a pandemic, based on the rapid increase in exposure globally.

The full impact of the COVID-19 Outbreak continues to evolve as of the date of this report. As a result, we cannot estimate the full magnitude that the pandemic will have on our business. If the COVID-19 Outbreak continues, it

may have a material adverse effect on our financial condition, liquidity, and future results of operations for the future. We are actively monitoring the impact of the global pandemic on our financial condition, liquidity, operations, industry, and workforce. Given the daily evolution of the COVID-19 Outbreak and the global responses to curb its spread, we are not able to estimate the effects of the COVID-19 Outbreak on our results of operations, financial condition, or liquidity for the future. While we have not currently experienced any potential delays or increased costs as a result of these measures, we may do so in the future.

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP"). Any reference in these notes to applicable guidance is meant to refer to the authoritative GAAP as found in the Accounting Standards Codification ("ASC") and Accounting Standards Updates ("ASU") of the Financial Accounting Standards Board ("FASB").

Use of Estimates

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities and expenses and the disclosure of contingent assets and liabilities in its financial statements and the reported amounts of expenses during the reporting period. The most significant estimates in the Company's financial statements relate to the valuation of common stock, stock options, warrants, the embedded features in convertible notes and the valuation allowance of deferred tax assets resulting from net operating losses. These estimates and assumptions are based on current facts, historical experience and various other factors believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities and the recording of expenses that are not readily apparent from other sources. Actual results may differ materially and adversely from these estimates. To the extent there are material differences between the estimates and actual results, the Company's future results of operations will be affected.

Certain Risks and Uncertainties

The Company's activities are subject to significant risks and uncertainties including the risk of failure to secure additional funding to properly execute the Company's business plan. The Company is subject to risks that are common to companies in the pharmaceutical industry, including, but not limited to, development by the Company or its competitors of new technological innovations, dependence on key personnel, reliance on third party manufacturers, protection of proprietary technology, and compliance with regulatory requirements

Off-Balance Sheet Risk and Concentrations of Credit Risk

The Company has no significant off-balance sheet risks, such as foreign exchange contracts, option contracts, or other foreign hedging arrangements. Cash accounts are maintained at financial institutions that potentially subject the Company to concentrations of credit risk. At December 31, 2021 and 2020, substantially all of the Company's cash was deposited in accounts at one financial institution. The Company maintains its cash deposits, which at times may exceed the federally insured limits, with a reputable financial institution and, accordingly, the Company believes such funds are subject to minimal credit risk.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with maturities of three months or less to be cash equivalents. As of December 31, 2021 and 2020, cash includes cash in a depository bank account; the Company has no cash equivalents as of December 31, 2021 and 2020.

Fair Value Measurements

ASC 820, *Fair Value Measurements*, provides guidance on the development and disclosure of fair value measurements. Under this accounting guidance, fair value is defined as an exit price, representing the amount 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. As such, fair value is a market-based measurement that should be determined based on

assumptions that market participants would use in pricing an asset or a liability. To increase the comparability of fair value measures, the following hierarchy prioritizes the inputs to valuation methodologies used to measure fair value:

- Level 1 - Valuations based on quoted prices for identical assets and liabilities in active markets.
- Level 2 - Valuations based on observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data.
- Level 3 - Valuations based on unobservable inputs reflecting our own assumptions, consistent with reasonably available assumptions made by other market participants. These valuations require significant judgment.

Fair value measurements discussed herein are based upon certain market assumptions and pertinent information available to management as of and during the year ended December 31, 2021, and 2020. The carrying amount of accounts payable approximated fair value as they are short term in nature. The fair value of warrants issued for services are estimated based on the Black-Scholes model during the year ended December 31, 2021. The carrying value of notes payable and convertible notes payable approximated the estimated fair values due to their recent issuances. The estimated fair value of the warrants issued with the convertible notes and embedded features, represented Level 3 measurements.

General and Administrative

General and administrative expenses primarily consist of costs for corporate functions, including payroll and related expenses, depreciation and amortization, rent, outside legal expenses, insurance costs, and other general and administrative costs.

Research and Development

The Company's research and development expenses consist primarily of costs associated with the Company's clinical trials, salaries, payroll taxes, employee benefits, and stock-based compensation charges for those individuals involved in ongoing research and development efforts. Research and development costs are expensed as incurred. Advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received.

As part of the process of preparing the consolidated financial statements, the Company is required to estimate its accrued expenses. This process involves reviewing quotations and contracts, identifying services that have been performed on the Company's behalf and estimating the level of service performed and the associated cost incurred for the service when the Company has not yet been invoiced or otherwise notified of the actual cost. The majority of the Company's service providers invoice the Company monthly in arrears for services performed or when contractual milestones are met. The Company makes estimates of its accrued expenses as of each balance sheet date in our consolidated financial statements based on facts and circumstances known to the Company at that time. The Company periodically confirms the accuracy of its estimates with the service providers and makes adjustments if necessary. The significant estimates in the Company's accrued research and development expenses are related to expenses incurred with respect to CROs, CMOs and other vendors in connection with research and development and manufacturing activities.

The Company bases its expense related to CROs and CMOs on its estimates of the services received and efforts expended pursuant to quotations and contracts with such vendors that conduct research and development and manufacturing activities on the Company's behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to the Company's vendors will exceed the level of services provided and result in a prepayment of the applicable research and development or manufacturing expense. In accruing service fees, the Company estimates the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from its estimate, the Company adjusts the accrual or prepaid expense accordingly. Although the Company does not expect its estimates

to be materially different from amounts actually incurred, the Company's understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and could result in us reporting amounts that are too high or too low in any particular period. There have been no material changes in estimates for the periods presented.

Research and Development Incentive

The Company recognizes other income from Australian research and development incentives when there is reasonable assurance that the income will be received, the relevant expenditure has been incurred, and the consideration can be reliably measured. The research and development incentive is one of the key elements of the Australian Government's support for Australia's innovation system and is supported by legislative law primarily in the form of the Australian Income Tax Assessment Act 1997, as long as eligibility criteria are met.

Management has assessed the Company's research and development activities and expenditures to determine which activities and expenditures are likely to be eligible under the research and development incentive regime described above. At each period end, management estimates the refundable tax offset available to the Company based on available information at the time.

Under the program, a percentage of eligible research and development expenses incurred by the Company through its subsidiary in Australia are reimbursed.

Derivative Financial Instruments

The Company does not use derivative instruments to hedge exposures to cash flow, market, or foreign currency risks. The Company evaluates all of its financial instruments, to determine if such instruments contain features that qualify as embedded derivatives.

Embedded derivatives must be separately measured from the host contract if all the requirements for bifurcation are met. The assessment of the conditions surrounding the bifurcation of embedded derivatives depends on the nature of the host contract. Bifurcated embedded derivatives are recognized at fair value, with changes in fair value recognized in the statement of operations each period.

Stock-Based Compensation

The Company records share-based compensation for awards granted to employees, non-employees, and to members of the board of directors based on the grant date fair value of awards issued, and the expense is recorded on a straight-line basis over the requisite service period. Forfeitures are recognized when they occur.

The Company uses the Black-Scholes-Merton option pricing model to determine the fair value of stock options and warrants. The use of the Black-Scholes-Merton option-pricing model requires management to make assumptions with respect to the expected term of the option, the expected volatility of the common stock consistent with the expected life of the option, risk-free interest rates and expected dividend yields of the common stock. The Company has concluded that its historical share option exercise experience does not provide a reasonable basis upon which to estimate expected term. Therefore, the expected term was determined according to the simplified method, which is the average of the vesting tranche dates and the contractual term. Due to the lack of company specific historical and implied volatility data, the estimate of expected volatility is primarily based on the historical volatility of a group of similar companies that are publicly traded. For these analyses, companies with comparable characteristics are selected, including enterprise value and position within the industry, and with historical share price information sufficient to meet the expected life of the share-based awards. The Company computes the historical volatility data using the daily closing prices for the selected companies' shares during the equivalent period of the calculated expected term of its share-based awards. The risk-free interest rate is determined by reference to U.S. Treasury zero-coupon issues with remaining maturities similar to the expected term of the options. The Company has not paid, and does not anticipate paying, cash dividends on shares of its common stock.

Prior to the initial public offering, in order to estimate the fair value of shares of the common stock, the Company's board of directors considered, among other things, sales of common stock to third party investors and valuations of common stock, business, financial condition and results of operations, including related industry trends affecting

operations; the likelihood of achieving a liquidity event, such as an initial public offering, or sale, given prevailing market conditions; the lack of marketability of our common stock; the market performance of comparable publicly traded companies; and U.S. and global economic and capital market conditions.

The fair values of DGD and THIO common stock were based on sales of common stock to third parties for the year ended December 31, 2020. There were no issuances of common stock as it relates to DGD or THIO during the year ended December 31, 2021. The fair value of restricted stock awards is based on common stock value.

All stock-based compensation costs are recorded in general and administrative or research and development costs in the consolidated statements of operations based upon the underlying individual's role at the Company.

Common Stock Warrants

The Company accounts for common stock warrants as either equity instruments or liabilities in accordance with ASC 480, Distinguishing Liabilities from Equity ("ASC 480"), depending on the specific terms of the warrant agreement.

When warrants are issued for services to non-employees, under ASC 718, Compensation - Stock Compensation ("ASC 718"), the warrants were classified as a liability if 1) the underlying shares are classified as liabilities or 2) the entity can be required under any circumstances to settle the warrant by transferring cash or other assets. In accordance with ASU 2018-07, Improvements to Nonemployee Share-Based Payment Accounting, the measurement of equity-classified nonemployee share-based payments is generally fixed on the grant date and are considered compensatory, as defined by ASC 718.

Income Taxes

Income taxes are recorded in accordance with ASC 740, Income Taxes ("ASC 740"), which provides for deferred taxes using an asset and liability approach. The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are provided, if based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. The Company accounts for uncertain tax positions in accordance with the provisions of ASC 740. When uncertain tax positions exist, the Company recognizes the tax benefit of tax positions to the extent that the benefit would more likely than not be realized assuming examination by the taxing authority. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position as well as consideration of the available facts and circumstances. The Company recognizes any interest and penalties accrued related to unrecognized tax benefits as income tax expense.

Deferred Offering Costs

Deferred offering costs are included in other assets and consists of legal, accounting, underwriting fees and other costs incurred through the balance sheet date that are directly related to the planned initial public offering and that will be charged to additional paid-in capital upon the completion of the planned initial public offering. Should the planned initial public offering prove to be unsuccessful, these deferred costs, as well as additional expenses to be incurred, will be charged to operations.

Net Loss Per Share

Basic loss per share of common stock is computed by dividing net loss attributable to common stockholders by the weighted average number of shares of common stock outstanding for the period. Diluted net loss per share is calculated by adjusting the weighted-average number of shares outstanding for the dilutive effect of common stock equivalents outstanding for the period, determined using the treasury-stock method. Diluted loss per share excludes, when applicable, the potential impact of stock options, unvested shares of restricted stock awards, and common stock warrants because their effect would be anti-dilutive due to our net loss. Gains on warrant liabilities are only considered dilutive when the average market price of the common stock during the period exceeds the exercise price of the warrants. Since the Company had a net loss in each of the periods presented, basic and diluted net loss per common share are the same.

The following table summarizes the Company's potentially dilutive securities, in common share equivalents, which have been excluded from the calculation of dilutive loss per share as their effect would be anti-dilutive:

	Year ending December 31,	
	2021	2020
Shares issuable upon exercise of stock options	5,797,185	3,664,966
Shares issuable upon exercise of warrants	1,311,117	908,244
Unvested restricted stock awards	58,333	147,778

Recent Accounting Standards

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and are adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

Accounting Standards Issued, Not Yet Adopted

In February 2016, the FASB issued ASU No. 2016-02, as amended, Leases ("Topic 842"), which applies to all leases. Under Topic 842, a right-of-use asset and lease obligation will be recorded for all leases, whether operating or financing leases, while the statement of operations will reflect lease expense for operating leases and amortization and interest expense for financing leases. Topic 842 is effective for public entities for fiscal years beginning after December 15, 2018 and periods beginning after December 15, 2021 for all other entities. Entities are required to use a modified retrospective approach of adoption for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. The Company currently expects that none of its operating lease commitments will be subject to the new standard as the Company's leases are short-term in nature (i.e., less than twelve months). The Company will adopt this new standard as of January 1, 2022.

In June 2016, the FASB issued ASU No. 2016-13, Measurement of Credit Losses on Financial Instruments (ASU 2016-13), which requires a financial asset (or a group of financial assets) measured at amortized cost basis to be presented at the net amount expected to be collected. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial asset(s) to present the net carrying value at the amount expected to be collected on the financial asset. The new standard is effective for the Company for fiscal years beginning after December 15, 2022. The Company is currently evaluating the impact of the pending adoption of the new standard on its financial statements and intends to adopt the standard as of January 1, 2023.

2. RELATED PARTY TRANSACTIONS

Consulting Services

Wayne Klohs is a shareholder and former member of the board of directors who also provided consulting services to the Company. During the year ended December 31, 2020, the Company incurred a total of $20,400 to Mr. Klohs for consulting services. The Company did not receive consulting services from Mr. Klohs during the year ended December 31, 2021.

Leigh-Ann Durant, a former member of the Company's board of directors prior to her stepping down in November 2021, provides consulting services to the Company for which the Company incurred $129,171 for services provided during the year ended December 31, 2020, $53,981 of which is stock-based compensation which consist of options to purchase 47,569 shares of common stock. The Company incurred $88,994 for consulting services provided by Ms. Durant during the year ended December 31, 2021. The Company paid Ms. Durant $34,560 in cash, and issued her options to purchase 23,964 shares of common stock with a total fair value of $54,434 during the year ended December 31, 2021.

Mukesh Nyati was a minority shareholder of DGD and a consultant who received 222,500 shares of restricted stock in DGD during the year ended December 31, 2020, for his services along with cash. During 2020, the Company

incurred $152,576 in research fees, $75,000 of which is stock-based compensation. Dr. Nyati is also the one of the principal researchers at the University of Michigan who was working on the specific compound licensed from the University of Michigan.

Radu Vitoc, a shareholder and brother of the CEO, provides consulting services to the Company for which the Company incurred $4,700 for services provided during the year ended December 31, 2021. The Company paid Mr. Vitoc $2,350 in cash, and issued him options to purchase 184 shares of common stock with a total fair value of $1,100. The remaining $1,250 for services provided in fiscal 2021 will be settled in options for which the Company has not yet issued to Mr. Vitoc as of December 31, 2021. The Company also issued him a convertible note in the amount of $50,000 during April 2021, which was converted into 8,557 shares of common stock on September 30, 2021 at a conversion price of $6.00 per share (See Note 5), and also received 4,278 warrants to purchase shares of common stock at an exercise price of $6.00 per share.

CEO Loan Agreement

The Company's chief executive officer lent the Company a total of $25,000 in August and September of 2018. These amounts, were unsecured, had no stated interest rate, and no stated repayment terms. The Company repaid $3,633 of the loan to the CEO during 2020 and $367 during 2021. The Company paid these loans in full in March 2021, by issuing the CEO a convertible note in the amount of $21,000. The convertible note issued to the CEO was converted into 3,621 shares of common stock on September 30, 2021 at a conversion price of $6.00 per share (See Note 5).

Deferred Compensation Agreements

As of December 31, 2021 and December 31, 2020, the Company had $111,271 and $661,058, respectively, of deferred compensation due to certain employees and officers of the Company pursuant to deferred compensation agreements executed during fiscal 2020 and 2019 as part of a non-qualified deferred compensation plan. Pursuant to the deferred compensation agreements, the employees had deferred a portion of their annual base salary to be paid upon a Qualified Fund Raising. The Qualified Fund Raising was achieved during July 2021. Upon this event, the employees' salaries were increased up to the market rates set forth in their respective agreements, and all amounts were paid to the employees. The remaining deferred compensation balance as of December 31, 2021 relates to amounts incurred for employees who were no longer with the Company as of the payout date.

During the year ended December 31, 2021, the Company accrued $193,379 in deferred compensation. The Company paid $457,749 in cash and issued 268,769 options with a total fair value of $296,264 during the year ended December 31, 2021, to settle a portion of the deferred compensation balance totaling $743,167. The fair value of the options issued in excess of the deferred compensation balance settled totaling $10,846 was recorded as stock-based compensation expense which is presented within general and administrative expenses on the statement of operations for the year ended December 31, 2021.

Accrued Bonus

During the year ended December 31, 2021 and 2020, the Company accrued $384,750 and $780,000, respectively, in bonus expense relating to certain key employees and officers of the Company. On April 16, 2021, the 2020 accrued bonus balance was settled by issuance of 713,536 stock options with a total fair value of $786,531. The fair value of the options issued in excess of the accrued bonus balance totaled $6,531 and was recorded as stock-based compensation expense which is presented within general and administrative expenses on the statement of operations for the year ended December 31, 2021.

3. ACCRUED EXPENSES

As of December 31, 2021 and 2020, accrued expenses consisted of the following:

	December 31,	
	2021	2020
Bonus	$ 384,750	780,000
Interest	—	12,678
Professional fees	380,277	46,132
Research and development costs	268,140	—
Other	41,157	$ —
Total accrued expenses	$ 1,074,324	$ 838,810

4. PAYCHECK PROTECTION PROGRAM

In May 2020, the Company applied for and received $62,500 in unsecured loan funding from the Paycheck Protection Program (the "PPP Loan"), established pursuant to the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") and administered by the U.S. Small Business Administration ("SBA"). The Company received full forgiveness of all outstanding principal and accrued and unpaid interest on the PPP Loan in December 2020.

On January 31, 2021, the Company received a second PPP Loan in the amount of $62,500. Under the terms of PPP Loan, interest accrues on the outstanding principal at the rate of 0.98% per annum. The term of the PPP Loan is two years. To the extent that the loan amount is not forgiven by the SBA, the Company is obligated to make equal monthly payments of principal and interest, beginning seven months from the date of the PPP Loan, until the maturity date. The loan amount may be eligible for forgiveness if used for qualifying expenses and other qualifying criteria are met. The Company used the entire PPP Loan for qualifying expenses.

The Company received full forgiveness of all outstanding principal and accrued and unpaid interest on the PPP Loan in November 2021. The forgiveness of the PPP Loan qualified for debt extinguishment in accordance with ASC 470-50, Debt Modifications and Extinguishments, and as a result, the outstanding principal and interest was written off in the amount of $62,500, and the Company recorded a gain on extinguishment totaling $62,500 for the year ended December 31, 2021.

5. CONVERTIBLE NOTES PAYABLE

Convertible Notes Payable

	December 31, 2021	December 31, 2020
Convertible notes payable:		
Convertible note balance	$ —	$ 620,000
Debt discount	—	(177,613)
Carrying value of convertible notes payable	$ —	$ 442,387
Convertible note payable, current portion	$ —	$ 10,586
Convertible notes payable, related parties	—	98,960
Convertible notes payable, net of current portion	—	332,841
Carrying value of convertible notes payable	$ —	$ 442,387

Convertible Notes Payable issued in 2019

In July 2019, the Company issued a Convertible Promissory Note totaling $10,000 to one individual (the "2019 Convertible Note"). The 2019 Convertible Note bore interest at 8% per annum, was unsecured, with a scheduled

maturity date of December 31, 2021. The 2019 Convertible Note contained an automatic conversion feature, such that in the event the Company consummated an Equity Financing, as defined in the agreement, prior to the 2019 Convertible Note's scheduled maturity, the outstanding principal and interest would automatically converted into Preferred Stock (the shares of a class or series of preferred stock of the Company issued in connection with an Equity Financing) of the Company issued in connection with the Equity Financing. The Equity Financing is defined as a bona fide transaction or series of transactions with the principal purpose of raising capital, pursuant to which the Company receives gross aggregate proceeds of not less than $5,000,000 (before any transaction related expenses and costs). The conversion price will be set at 65% of the price of the preferred stock issued in the aforementioned Equity Financing.

Embedded Put Feature

The Company determined that the terms related to the Equity Financing conversion, (the “Embedded Put Feature”) were not clearly and closely related to the 2019 Convertible Note host instrument and meets the definition of a derivative. Therefore, the Embedded Put Feature was bifurcated from the 2019 Convertible Note and separately measured at fair value. The derivative liability has been subsequently marked-to-market each reporting period with changes in fair value recognized in the statement of operations.

The Embedded Put Feature was initially recorded as a debt discount and a related derivative liability at fair value. The debt discount is amortized using the effective interest rate over the original term of the 2019 Convertible Note.

Interest expense on the 2019 Convertible Note totaled $607 and $1,156 for the year ended December 31, 2021 and 2020, respectively.

The debt discount and value of the Embedded Put Feature in the 2019 Convertible Note totaled $1,000 at issuance. The balance of the debt discount was $0 and $414 as of December 31, 2021 and December 31, 2020, respectively. During the year ended December 31, 2021 and 2020, amortization of debt discount amounted to $310 and $586, respectively.

Convertible Notes Payable issued in 2020

During 2020, the Company issued Convertible Promissory Notes totaling $610,000 to various investors or holders, including $110,000 of Convertible Promissory Notes to related parties (collectively, the "2020 Convertible Notes") throughout fiscal 2020. The 2020 Convertible Notes bore interest at 6% per annum, was unsecured, with a scheduled maturity date of May 31, 2022.

The 2020 Convertible Notes are automatically convertible into shares of the Company's Equity Financing Shares (shall mean the shares of any class or series of preferred stock of the Company issued in connection with an Equity Financing), upon the closing of an Equity Financing yielding gross proceeds of in excess of $5,000,000 (before any transaction related expenses and costs). The 2020 Convertible Notes also are convertible into common shares of the Company at the holders' election upon (i) a Change in Control whereby any person or group becomes a beneficial owner of more than 50% of the Company's outstanding voting securities in connection with a merger or reorganization, or (ii) at the time of maturity.

Common stock issued on conversion shall be shares of the Company’s stock that have substantially the same rights and preferences as the shares issued in such Equity Financing.

Conversion Prices

The conversion price is set at 75% of the price of the preferred stock issued in the aforementioned Equity Financing. The 2020 Convertible Notes also contain a clause that accelerates their maturity upon a change in control of the Company, as defined above.

Embedded Put Features

The Company has determined that the terms related to the Equity Financing conversion, Change in Control, and maturity conversion features (collectively, the “Embedded Put Features”) included within the 2020 Convertible Notes were not clearly and closely related to the 2020 Convertible Note host instrument and meet the definition of a

derivative. Therefore, the Embedded Put Features were bifurcated from the 2020 Convertible Notes and measured at fair value. The derivative liability has been subsequently marked-to-market each reporting period with changes in fair value recognized in the statement of operations.

The Embedded Put Features were initially recorded as a debt discount and a related derivative liability at fair value in the amount of $131,000 at issuance of the 2020 Convertible Notes (see Note 7). The debt discount is amortized using the effective interest rate over the original term of the 2020 Convertible Notes.

Maturity Date

The maturity date on the 2020 Convertible Notes is the earliest occurrence of (i) the closing of a Qualified Equity Financing, or (ii) the date upon which the Convertible Notes are otherwise converted into equity securities, or (iii) May 31, 2022.

Interest expense on the 2020 Convertible Notes totaled $27,375 and $11,523 for the year ended December 31, 2021 and 2020, respectively.

Debt discounts on the 2020 Convertible Notes totaled $0 and $177,199 as of December 31, 2021 and 2020, respectively. During the year ended December 31, 2021 and 2020, amortization of debt discounts amounted to $83,608 and $19,461, respectively.

Warrants

In connection with each of the 2020 Convertible Notes, the Company issued each holder warrants (the 2020 Warrants) to acquire additional shares of common stock of the Company. Each holder of a 2020 Convertible Note received a warrant to purchase that number of shares of common stock as determined by multiplying the number of Equity Financing Shares which are issuable upon conversion of the holder's Convertible Note by 50%, at an exercise price equal to the conversion price per share used in the conversion of the Convertible Note.

The 2020 Warrants were initially recorded as a debt discount and a related warrant liability at fair value in the amount of $65,660 (see Note 7) at issuance of the 2020 Convertible Notes. Subsequent to issuance, the 2020 Warrants have been marked-to-market each reporting period with changes in fair value recognized in the statement of operations. The debt discount is amortized using the effective interest rate over the original term of the 2020 Convertible Notes.

Convertible Notes Payable issued in 2021

During the year ended December 31, 2021, the Company issued Convertible Promissory Notes totaling $7,390,000 to various investors or holders, including $1,863,300 of Convertible Promissory Notes to related parties (collectively, the "2021 Convertible Notes") which included a $21,000 Convertible Promissory Note to settle a loan to the Company's CEO (see Note 2) . The 2021 Convertible Notes bear interest at 6% per annum, are unsecured, and have scheduled maturity dates ranging from February 15, 2023 through June 28, 2023.

The 2021 Convertible Notes are automatically convertible into shares of the Company's Equity Financing Shares (shall mean the shares of any class or series of preferred stock of the Company issued in connection with an Equity Financing), upon the closing of an Equity Financing yielding gross proceeds of in excess of $5,000,000 (before any transaction related expenses and costs). The 2021 Convertible Notes also are convertible into common shares of the Company at the holders' election upon (i) a Change in Control whereby any person or group becomes a beneficial owner of more than 50% of the Company's outstanding voting securities in connection with a merger or reorganization, or (ii) at the time of maturity.

Common stock issued on conversion shall be shares of the Company’s stock that have substantially the same rights and preferences as the shares issued in such Equity Financing.

Conversion Prices

The conversion price was set at 75% of the price of the common stock issued in the aforementioned Equity Financing. The 2021 Convertible Notes also contain a clause that accelerates their maturity upon a change in control of the Company, as defined above.

Embedded Put Features

The Company has determined that the terms related to the Equity Financing conversion, Change in Control, and maturity conversion features (collectively, the "Embedded Put Features") included within the 2021 Convertible Notes were not clearly and closely related to the 2021 Convertible Note host instrument and meet the definition of a derivative. Therefore, the Embedded Put Features were bifurcated from the 2021 Convertible Notes and measured at fair value. The derivative liability has been subsequently marked-to-market each reporting period with changes in fair value recognized in the statement of operations.

The Embedded Put Features were initially recorded as a debt discount and a related derivative liability at fair value in the amount of $2,821,000 at issuance of the 2021 Convertible Notes (see Note 7). The debt discount is amortized using the effective interest rate over the original term of the 2021 Convertible Notes.

Maturity Date

The maturity date on the 2021 Convertible Notes is the earliest occurrence of (i) the closing of a Qualified Equity Financing, or (ii) the date upon which the Convertible Notes are otherwise converted into equity securities, or (iii) maturity dates ranging from February 15, 2023 through June 28, 2023.

Interest expense on the 2021 Convertible Notes totaled $199,049 and $0 for the year ended December 31, 2021 and 2020, respectively.

During the year ended December 31, 2021 and 2020, amortization of debt discounts amounted to $513,035 and $0, respectively.

Warrants

In connection with each of the 2021 Convertible Notes, the Company issued each holder warrants (the 2021 Warrants) to acquire additional shares of common stock of the Company. Each holder of a 2021 Convertible Note received a warrant to purchase that number of shares of common stock as determined by multiplying the number of Equity Financing Shares which are issuable upon conversion of the holder's Convertible Note by 50%, at an exercise price equal to the conversion price per share used in the conversion of the Convertible Note.

The 2021 Warrants were initially recorded as a debt discount and a related warrant liability at fair value in the amount of $320,460 (see Note 7) at issuance of the 2021 Convertible Notes. Subsequent to issuance, the 2021 Warrants have been marked-to-market each reporting period with changes in fair value recognized in the statement of operations. The debt discount is amortized using the effective interest rate over the original term of the 2021 Convertible Notes.

Conversion of Convertible Notes Upon Equity Financing

Convertible Notes

In connection with the sale of common stock in fiscal 2021, an Equity Financing of gross proceeds in excess of $5 million, the Company converted all $8,010,000 of its outstanding principal and all accrued and unpaid interest of approximately $240,000 related to the Company's 2019 Convertible Note, 2020 Convertible Notes, and 2021 Convertible Notes into 1,375,228 shares of the Company's common stock on September 30, 2021 at a conversion price of $6.00 per share.

The Company accounted for the conversion of the Convertible Notes as an extinguishment. The Company recorded an approximate $2.3 million loss on extinguishment, upon conversion, year ended December 31, 2021. The loss on extinguishment of the Convertible Notes included a write-off of the unamortized debt discount of approximately $3.3 million.

As of December 31, 2021 there were no Convertible Notes outstanding.

Warrants

On September 30, 2021, in connection with conversion of the 2020 and 2021 Convertible Notes, the terms of the warrants issued with the 2020 and 2021 Convertible notes became fixed such that the warrants are exercisable for a fixed number of shares of common stock at a fixed exercise price per share based on the amount of shares issuable upon conversion of the Convertible Notes and an exercise price equal to the conversion price per share used in the conversion of the Convertible Notes. The warrants are exercisable for 686,489 shares of common stock with an exercise price of $6.00 and expire at various dates throughout fiscal 2028.

As of December 31, 2021, 4,504 of these warrants have been exercised.

6. SIMPLE AGREEMENT FOR FUTURE EQUITY

In October 2019, the Company issued a simple agreement for future equity ("SAFE Agreement") for $25,000. The SAFE Agreement requires automatic conversion to preferred stock in the event of an equity financing. If the Company experiences a liquidity event, as defined, the holder may opt for either conversion or repayment in cash, with repayment based upon a valuation at the time of such event. Upon a dissolution event, as defined, the SAFE Agreement requires repayment in cash. The conversion price will be set at 60% of the price of the preferred stock issued in the aforementioned equity financing. The SAFE Agreement shall terminate upon either the issuance of shares or repayment in cash as per the agreement's terms. Due to the contingencies associated with the potential conversion and conversion price as well as the valuation upon a future liquidity event should one occur, no discount associated with these features has been recorded in the accompanying consolidated financial statements.

In connection with the sale of common stock in 2021, an Equity Financing, the SAFE in the amount of $25,000 was converted into 5,208 shares of the Company’s common stock on September 30, 2021. The price of the common shares issued in the equity financing was $8.00. The conversion price was equal to 60% of $8.00 per share, or $4.80 per share.

7. FAIR VALUE OF FINANCIAL LIABILITIES

Financial liabilities consisting of embedded derivative liabilities and warrant liabilities measured at fair value on a recurring basis are summarized below. The fair values of the embedded derivative liabilities and warrant liabilities recorded are as follows:

	Fair value at September 30, 2021			
	Total	Level 1	Level 2	Level 3
Liabilities:				
Derivative liability, bifurcated put contained in convertible notes payable	$ —	$ —	$ —	$ —
Warrant liability	—	—	—	—
Total liabilities	$ —	$ —	$ —	$ —

	Fair value at December 31, 2020			
	Total	Level 1	Level 2	Level 3
Liabilities:				
Derivative liability, bifurcated put contained in convertible notes payable	$ 127,000	$ —	$ —	$ 127,000
Warrant liability	85,260	—	—	85,260
Total liabilities	$ 212,260	$ —	$ —	$ 212,260

The table below provides a summary of the changes in fair value of the derivative liabilities and warrant liabilities measured on a recurring basis using significant unobservable inputs (Level 3):

	Year Ended December 31,	
Derivative liabilities:	2021	2020
Balance, beginning of period	$ 127,000	$ 1,000
Derivative liability on convertible notes payable	2,821,000	131,000
Loss (Gain) on fair value of embedded features	203,000	(5,000)
Extinguishment of derivative liability in connection with debt conversion	(3,151,000)	—
Balance, end of period	$ —	$ 127,000

	Year Ended December 31,	
Warrant liabilities:	2021	2020
Balance, beginning of period	$ 85,260	$ —
Warrant liability	320,460	65,660
Loss on fair value of warrant liability	1,546,280	19,600
Reclassification of warrant liability to equity	(1,952,000)	—
Balance, end of period	$ —	$ 85,260

Derivative Liability

The Embedded Put Features were separately measured at fair value, with changes in fair value recognized in current operations. The scenario-based analysis estimates the fair value of the Convertible Notes based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available to the holders, including various settlement, equity financing, and corporate transaction and dissolution scenarios. Estimating fair values of Embedded Put Features required the development of significant and subjective estimates that changed over the duration of the instrument with related changes in internal and external market factors. Because the Embedded Put Features are initially and subsequently carried at fair values, the Company's income reflected the volatility in these estimate and assumption changes.

Immediately prior to the conversion of the convertible notes, the derivative liability was marked to fair value resulting in a loss of $203,000 for the year ended December 31, 2021. The recurring Level 3 fair value measurements of the embedded derivative liability included the following significant unobservable inputs as of the conversion. The probability of the Convertible Notes outstanding at maturity was estimated to be approximately 0%; the probability of an equity financing was estimated to be approximately 100%; and the probability of default, change in control or dissolution was estimated to be approximately 0%. On September 30, 2021 the embedded derivative liability was extinguished in connection with the conversion of the convertible notes.

Convertible Note Warrants

The Warrants were separately measured at fair value, with changes in fair value recognized in current operations. The fair value of the Warrants was determined using the Black-Scholes-Merton option-pricing model utilizing inputs such as the fair value of the underlying stock, expected term, expected volatility of the underlying stock over the expected term, and the risk-free interest rate over the expected term. The Warrants were valued at each issuance date of the convertible notes and at each quarter end based on the assumptions for each of the conversion scenarios contained within each of the convertible notes. The following are the significant assumptions utilized in the Black-Scholes-Merton option-pricing model; risk-free interest rate 0.0% - 1.3%; expected term (in years) 0.46 - 6.61; expected volatility 81% - 106%; expected dividend yield 0% - 0%. Changes to these assumptions had an impact on the fair value of the Warrants and related fair value adjustments.

On September 30, 2021, in connection with conversion of the 2020 and 2021 Convertible Notes, the terms of the warrants issued with the 2020 and 2021 Convertible notes became fixed such that the warrants are exercisable for a fixed number of shares of common stock at a fixed exercise price per share based on the amount of shares issuable upon conversion of the Convertible Notes and an exercise price equal to the conversion price per share used in the conversion of the Convertible Notes. The warrants are now exercisable for 686,489 shares of common stock with an exercise price of $6.00 and expire at various dates throughout fiscal 2028.

The Company determined as of September 30, 2021 the warrants should be equity classified and reclassified the fair value of the warrant liability of $1,952,000 into additional paid-in capital. The change in fair value of the warrant liability of $1,546,280 for the year ended December 31, 2021 is reflected in “Change in fair value of warrant liability” in the accompanying statement of operations.

8. STOCKHOLDERS' EQUITY

Upon incorporation, MAIA was authorized to issue 10,000,000 shares of common stock, with a par value of $0.0001 per share. In March 2020, the shareholders approved an amended and restated certificate of incorporation which authorizes MAIA to issue 100,000,000 shares of stock, as follows: 70,000,000 shares of preferred stock and 30,000,000 shares of common stock, all with a par value of $0.0001 per share. The rights, privileges, preferences, and restrictions of the classes of stock have yet to be established. As of December 31, 2021, each of the common stockholders have equal voting rights, and except in the case of restricted common shares, equal rights of participation in dividends and other distributions with other common stockholders.

Among other provisions, MAIA's shareholders agreement gives first MAIA, followed by the non-selling shareholders, the option to purchase the outstanding shares of a shareholder prior to the sale of shares to a third party. Should the non-selling shareholders decline to purchase any portion of the selling shareholders shares, MAIA shall have a final opportunity to repurchase the shares. The agreement also contains provisions for "drag-along" and "tag-along" rights, as described in the agreement.

MAIA Equity Financing

Between July 18, 2021 and December 31, 2021, the Company sold 772,563 shares of common stock at $8.00 per share for gross proceeds of approximately $6.2 million. In connection with this sale of common stock, all of the outstanding convertible notes principal and accrued and unpaid interest were automatically converted into 1,375,228 shares of the Company’s common stock in accordance with the terms in the convertible notes (see Note 5).

MAIA Biotechnology, Inc. Restricted Stock Awards

Restricted Common Stock Awards to Founders - In October 2018, the Company awarded 2,100,000 restricted common shares to four founders. Vested shares may participate in any dividends and other distributions with other common stockholders, while the unvested shares, which are subject to forfeiture in the event the holder separates from service with the Company, do not participate in such events. The share awards are subject to service conditions, with 50% of the granted shares vesting immediately upon issuance, and the remaining 1,050,000 common shares vesting in 12 equal quarterly installments over a three-year period, with the first such quarterly installment vesting on January 1, 2019.

The related compensation expense was recognized 50% upon issuance, and the remainder is recognized ratably over the service period. In November 2019, upon termination of two of the founders, 400,000 of those founders' unvested shares were forfeited.

During the year ended December 31, 2021 and 2020, the Company recognized $202,500 and $270,000, respectively, in general and administrative expense related to the Founders' awards.

Restricted Common Stock Awards to Directors — During the year ended December 31, 2021, the Company awarded 15,278 restricted common shares to two directors. Vested shares may participate in any dividends and other distributions with other common stockholders. The share awards were subject to service conditions as defined in the agreements. The related compensation expense was recognized ratably over the service period. During the year ended December 31, 2021 the Company recognized $27,500 in general and administrative expense related to the Directors' awards, as they fully vested on December 31, 2021.

During the year ended December 31, 2020 the Company awarded 16,667 restricted common shares to one director. During the year ended December 31, 2020 the Company recognized $241,027 in general and administrative expense related to this Director's awards and previous Director's awards, as they fully vested by December 31, 2020.

	Shares		Weighted Average Grant Date Fair Value
Unvested balance at January 1, 2020	420,848	$	1.80
Granted	16,667		1.80
Vested	(289,737)		
Unvested balance at December 31, 2020	147,778	$	1.80
Exchanged for THIO founder restricted shares	87,500		1.80
Granted	15,278		1.80
Vested	(186,666)		
Cancelled/forfeited	(5,557)		
Unvested balance at December 31, 2021	58,333	$	1.80

On August 13, 2021, upon the dissolution of THIO and merger into MAIA (see Note 1), a founder's 612,500 fully vested THIO restricted shares were cancelled and the founder was issued 612,500 MAIA restricted shares. Additionally, in accordance with the founder's original award, the founder was also issued 87,500 MAIA restricted shares which vest ratably each quarter through June 30, 2022 to replace the equivalent number of unvested THIO restricted shares. The remaining unvested shares in the above table as of December 31, 2021 are related to the founder's unvested restricted shares only.

During the year ended December 31, 2021, MAIA recognized $105,000 of stock compensation expense related to the MAIA restricted shares granted to the founder. The issuance of restricted shares in MAIA as a replacement for the shares the founder held in THIO was accounted for as a modification. There was no additional incremental stock compensation recorded as related to the cancellation of the founder's THIO restricted shares and concurrent grant of MAIA restricted shares as the fair value of the original THIO award immediately before the grant of the MAIA restricted shares and the fair value of the replacement award were equal. The unrecognized stock compensation expense for the 58,333 unvested restricted shares as of December 31, 2021 is approximately $52,500, which will be recognized through March 2022.

MAIA Stock Warrants

During 2020, the Company issued warrants to purchase 110,520 shares of common stock to certain consultants for services rendered during the year. Of these warrant grants, 90,000 have an exercise price of $1.80 and 20,520 have an exercise price of $5.00 per share. The warrants' total calculated value of $124,064 is included in operating expenses in the accompanying consolidated statement of operations for the year ended December 31, 2020. As of December 31, 2021, all of these warrants, which expire at various dates through December 2027, are outstanding and exercisable.

In May 2020 through June 2021, the Company issued and sold convertible promissory notes with an aggregate principal amount of $8.0 million, which converted into 1,375,228 shares of its common stock on September 30, 2021, and warrants to purchase 686,489 shares of our common stock at $6.00 per share. As of December 31, 2021, 4,504 of these warrants have been exercised, and 681,985 warrants, which expire at various dates through September 2028, are outstanding and exercisable.

	Warrants Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term in Years
Balance at January 1, 2020	797,724	$ 1.80	9.85
Granted	110,520	2.39	9.44
Balance at December 31, 2020	908,244	1.87	8.89
Granted	686,489	6.00	7.00
Exercised	(283,616)	1.87	
Balance at December 31, 2021	1,311,117	$ 4.03	7.30

The value of the warrants are calculated using the Black-Scholes-Merton option pricing model with the following assumptions for warrants granted during the years ended December 31, 2021 and 2020:

	2021	2020
Risk-free interest rate	0.6% - 1.3%	0.41% - 1.69%
Expected term (in years)	5 - 7	5 - 7
Expected volatility	81% - 106%	75.8% - 80.5%
Expected dividend yield	—%	—%

MAIA Biotechnology, Inc. Stock Award Plans

In 2018, the Company adopted the MAIA Biotechnology, Inc. 2018 Stock Option Plan (the "MAIA 2018 Plan"). MAIA's board of directors administers the MAIA Plan, under which 3,900,000 shares of common stock are reserved for stock option issuance, for the purposes of attracting, retaining, and motivating key employees, directors, and consultants of MAIA.

In 2020, the Company adopted the MAIA Biotechnology, Inc. Amended and Restated 2020 Equity Incentive Plan (the "MAIA 2020 Plan"), also administered by the board of directors. The MAIA 2020 Plan reserves 1,671,000 common shares for issuance, also for the purposes of attracting, retaining, and motivating key employees, directors, and consultants of MAIA. In November 2020, the MAIA 2020 Plan was amended to reserve a total of 3,171,000 shares of common stock. The MAIA 2020 Plan permits awards to take the form of stock options, restricted stock and restricted stock units. In April and July of 2021 there were amendments to the 2020 Plan to bring the plan to a total of 4,171,000 shares reserved for issuance. As of December 31, 2021, there was a remaining 331,815 shares available for issuance.

On November 5, 2021, the Company adopted the 2021 Equity Incentive Plan (the “2021 Plan”). The 2021 Plan was adopted to enhance the Company's ability to attract, retain and motivate employees, officers, directors, consultants

and advisors by providing such persons with equity ownership opportunities and performance-based incentives. The 2021 Plan is a comprehensive incentive compensation plan under which the Company can grant equity-based and other incentive awards to officers, employees, directors, consultants and advisers. The purpose of the 2021 Plan is to help the Company attract, retain, and motivate such persons with awards under the 2021 Plan and thereby enhance shareholder value. Per the terms of the 2021 Plan, it is not effective until the occurrence of an IPO.

Stock options are to be granted with an exercise price which is at least equal to the stock's estimated fair value at the date of grant, and with a contractual term of no more than 10 years from the date of grant. In the case of an option granted to a 10% stockholder, the exercise price shall be generally no less than 110% of the fair market value per share on the date of grant, and the contractual term shall be 7 years. Outstanding options awarded under the MAIA 2020 Plan may, but need not, vest and therefore become exercisable in periodic installments that may, but need not, be equal. The option may be subject to such other terms and conditions as to the time or times when it may be exercised (which may be based on performance or other criteria) as the board of directors may deem appropriate. Unexercised options are cancelled ninety days after termination of an employee, director, founder, or consultant. Unexercised options are cancelled immediately if an employee, director, founder, or consultant is terminated for cause; under certain other circumstances, the period to cancellation may differ as described in the respective plan documents. Certain clauses in the Plans also govern the Company's exercise repurchase rights and various other features of awards granted under the plans.

As of December 31, 2021, only stock options have been awarded pursuant to the MAIA stock award plans.

The following table summarizes the activity and information regarding MAIA's outstanding and exercisable options as of December 31, 2021:

	Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term in Years	Aggregate Intrinsic Value
Balance at January 1, 2020	1,627,000	$ 1.80	9.30	—
Granted	2,287,466	1.80	10.00	
Cancelled/forfeited	(249,500)	1.80		—
Balance at December 31, 2020	3,664,966	$ 1.80	9.13	—
Granted	2,210,787	2.92	9.38	
Exercised	(5,000)	1.80		—
Cancelled/forfeited	(73,568)	1.82		—
Balance at December 31, 2021	5,797,185	$ 2.22	8.59	38,784,352
Options exercisable at December 31, 2021	5,012,181	$ 1.91	8.52	34,865,649

During the period of March 2021 through May 2021, the fair value of the Company's common stock was estimated for financial reporting purposes based on valuations of $1.83 per share in February 2021 and April 2021 due to the lack of any single specific event that would have indicated a definitive change in the value of the Company. Between June 2021 and October 2021, the fair value of the Company's common stock, was determined based on sales of the Company's shares at arm's length to unrelated third parties at $8.00 per share.

During November 2021 and December 2021, the fair value of the Company's common stock was determined to be $8.69 and $8.87, respectively. For our valuations of common stock performed, we used a hybrid method of the Option Pricing Method ("OPM") and the Probability-Weighted Expected Return Method ("PWERM"). PWERM considers various potential liquidity outcomes. Our approach included the use of an initial public offering scenario, a scenario assuming continued operation as a private entity, and a dissolution scenario. Under the hybrid OPM and PWERM, the per share value calculated under the OPM and PWERM are weighted based on expected exit outcomes and the quality of the information specific to each allocation methodology to arrive at a final estimated fair value per share of the common stock before a discount for lack of marketability is applied.

To determine the fair value of our common stock, we first determined our enterprise value using accepted valuation approaches; adjusted these valuation approaches with relevant discounts; weighted the results appropriately; and then allocated the equity value to our common stock and common stock equivalents. Our enterprise value was estimated using two generally accepted approaches: the income approach and the market approach. The income approach estimates enterprise value based on the estimated present value of future cash flows the business is expected to generate over its remaining life. The estimated present value is calculated using a discount rate reflective of the risks associated with an investment in a similar company in a similar industry or having a similar history of revenue growth. The market approach measures the value of a business through an analysis of recent sales or offerings of comparable investments or assets, and in our case, focused on comparing us to a group of our peer companies. In applying this method, valuation multiples are derived from historical and projected operating data of the peer company group. We then apply the selected multiples to our operating data to arrive at a range of indicated enterprise values of the Company. We then subtracted the net debt to determine equity value.

Following the initial public offering, it will not be necessary to determine the fair value of our common stock, as our shares will be traded in the public market.

The value of option grants are calculated using the Black-Scholes-Merton option pricing model with the following assumptions for options granted during the year ended December 31,:

	2021	2020
Risk-free interest rate	0.36% - 1.27%	0.35% - 1.39%
Expected term (in years)	5 - 6.50	5 - 5.5
Expected volatility	71.40% - 81.5%	76.5% - 80.7%
Expected dividend yield	—%	—%

The weighted-average grant date fair values of stock options issued during the years ended December 31, 2021 and 2020 were $3.55 and $1.11, respectively. At December 31, 2021, the total unrecognized compensation related to unvested employee and non-employee stock option awards granted was $3,116,815, which the Company expects to recognize over a weighted average period of approximately 2.71 years.

DGD Pharmaceuticals Corporation 2019 Stock Option Plan

As of December 31, 2020, there were options for the purchase of 805,000 shares of common stock outstanding. There were no stock options granted under the DGD plan during the year ended December 31, 2021. All options were cancelled upon the dissolution of DGD on August 13, 2021 (see Note 1). During the years ended December 31, 2021 and 2020, compensation expense associated with previously-issued options was recognized in general and administrative expenses in the amount of $5,208 and $19,802, respectively.

THIO Therapeutics, Inc. Amended and Restated 2020 Equity Incentive Plan

THIO's board of directors administered the THIO Therapeutics, Inc. Amended and Restated Equity Incentive Plan (the "THIO Plan"), under which 1,000,000 shares of THIO's common stock were reserved for issuance, as authorized by the board of directors in June 2020. The terms of the THIO Plan provided for the grant of options, restricted stock, and restricted stock units to employees, directors, and consultants of THIO.

As of August 13, 2021, the THIO Plan was terminated upon dissolution of THIO.

Stock based compensation related to the Company’s stock plans are as follows:

	For the Year Ended December 31,	
	2021	2020
General and administrative	$ 1,512,726	$ 3,033,248
Research and development	943,708	337,792
Total stock-based compensation	$ 2,456,434	$ 3,371,040

Other Equity Activity of DGD and THIO

DGD Pharmaceuticals Corporation

DGD was authorized to issue 10,000,000 shares (4,000,000 Class A and 6,000,000 Class B) of stock with a par value of $0.0001 per share. Holders of Class A common shares were entitled to one vote per share, whereas holders of Class B were entitled to two votes per share. As of December 31, 2020, 2,575,000 and 6,000,000 shares of Class A and Class B stock, respectively, were issued and outstanding. As of December 31, 2020, MAIA owned 690,000 and 6,000,000 Class A and Class B common shares, respectively. Class A common shareholders were entitled to one vote per share, whereas Class B common shareholders were entitled to two votes per share.

All shares of DGD common stock cease to exist as of August 13, 2021, when the entity was legally dissolved.

Restricted Common Stock Awards to Founders of DGD — In May 2019, DGD awarded 1,550,000 restricted Class A common shares to four founders. The fair value of these shares was determined to be $1.00 based on sales of common stock to third parties, for a total fair value of $1,550,000. Vested shares participated in any dividends and other distributions with other common stockholders, while the unvested shares, which were subject to forfeiture in the event the holder separated from service with DGD, do not participate in such events. The share award was subject to service conditions, with 50% of the granted shares vesting at the date of grant, and the remaining 775,000 common shares vesting in 36 equal monthly installments over a three-year period, with the first such monthly installment vesting on June 1, 2019.

The related compensation expense is recognized ratably over the service period. For the year ended December 31, 2021 and 2020, the Company recognized $161,460 and $206,947, respectively, in compensation expense related to these awards which was presented in general and administrative expenses.

In addition, in December 2019, DGD issued 62,500 shares of Class A common stock to a stockholder which vested during 2020 as certain services were provided (Note 2). During 2020, the Company recorded $75,000 to research and development expenses in connection with this agreement.

On August 13, 2021, all remaining unvested restricted shares were cancelled upon the dissolution of DGD (see Note 1).

	Shares	Weighted Average Grant Date Fair Value
Unvested balance at January 1, 2020	686,804	$ 1.00
Granted	12,500	1.00
Vested	(320,836)	
Unvested balance at December 31, 2020	378,468	$ 1.00
Cancelled	(378,468)	
Unvested balance at August 13, 2021	—	$ —

Other Issuances of Common Stock

In January 2020, DGD issued 322,000 shares of Class B common stock to MAIA for $321,968.

In January 2020, DGD issued 50,000 shares of Class A common stock to investors for $50,000.

In February 2020, DGD issued 690,000 shares of Class A common stock and 10,000 shares of Class B common stock to MAIA for $699,999.

THIO Therapeutics Inc.

THIO was authorized to issue 11,000,000 shares of common stock with a par value of $0.00001 per share. All shares of THIO common stock cease to exist as of August 13, 2021, when the entity was legally dissolved.

Restricted Common Stock Award to Founder — In April 2019, THIO awarded 700,000 restricted common shares to a founder. Any vested shares participated in dividends and other distributions with other common stockholders, while the unvested shares, which were subject to forfeiture in the event the founder separates from service with THIO, did not participate in such events. The share award was subject to service conditions, with 350,000 shares vesting at the date of grant, and the remaining 350,000 common shares vesting in twelve equal quarterly installments over a three-year period, with the first such quarterly installment vesting on July 1, 2019.

	Shares	Weighted Average Grant Date Fair Value
Balance at January 1, 2020	291,667	$ 1.80
Vested	(116,667)	
Balance at December 31, 2020	175,000	$ 1.80
Vested	(87,500)	
Cancelled	(87,500)	
Balance at August 13, 2021	—	$ —

The related compensation expense was recognized over the service period. For the years ended December 31, 2021 and 2020, THIO recognized $105,000 and $210,000, respectively, in compensation expense related to this award which was presented in general and administrative expenses.

On August 13, 2021, upon the dissolution of THIO and merger into MAIA, a founder's 612,500 fully vested THIO restricted shares were cancelled and the founder was issued 612,500 MAIA restricted shares. Additionally, in accordance with the founder's original award, the founder was also issued 87,500 MAIA restricted shares which vest ratably each quarter through June 30, 2022 to replace the equivalent number of unvested THIO restricted shares which were cancelled.

Other Issuances of Common Stock

During 2020, THIO issued an additional 200,000 shares of common stock to MAIA for a price of $320,000.

9. COMMITMENTS AND CONTINGENCIES

Legal

From time to time, the Company is involved in legal actions and claims arising in the normal course of business. Management believes there are no matters which will have a material adverse effect on the Company's financial position, operations or cash flows.

Patent Licensing, Sponsored Research, and Patent & Technology Agreements

THIO - In November 2018 and as amended in December 2020, the Company entered into a Global Patent Licensing Agreement ("PLA") titled "Patent and Technology License Agreement AGT. NO. L2264 - MAIA Biotechnology" with the University of Texas Southwestern ("UTSW") to license patent families for a specific compound ("THIO") from UTSW to MAIA. The agreement, as amended, has a term of 20 years. The agreement requires MAIA to reimburse UTSW for agreed-upon expenses related to THIO. The agreement requires certain payments upon assignment of the license to a third party as well as upon reaching specific milestones, ranging between $1,000,000 and $50,000,000, not to exceed a combined milestone payment total of $112,000,000. As of December 31, 2021, no assignment has occurred and none of the defined milestones have been completed and therefore no payments are due to UTSW related to the milestones. The agreement requires royalties of 2-4% (depending on THIO reaching specified sales levels in the respective jurisdictions) royalty payments on net sales up to $1,000,000,000, and 2.5-5% on net sales above $1,000,000,000.

Also in December 2020, the Company entered into a second license agreement with UTSW titled "Patent and Technology License Agreement AGT. NO. L3648 — MAIA Biotechnology" pursuant to which UTSW is licensing an additional compound to MAIA. The agreement has a term of 20 years and requires the Company to reimburse UTSW for certain agreed-upon expenses. The agreement requires certain payments upon assignment of the license to a third party as well as upon reaching specific milestones, ranging between $1,000,000 and $50,000,000, not to exceed a combined milestone payment total of $112,000,000. As of December 31, 2020, no assignment has occurred and none of the defined milestones have been completed and therefore no payments are due to UTSW related to the milestones.

The agreement requires royalties of 2-4% (depending on THIO reaching specified sales levels in the respective jurisdictions) royalty payments on net sales up to $1,000,000, and 2.5-5% on net sales above $1,000,000,000.

The Company will also pay UTSW running royalties on a yearly basis as a percentage of Net Sales of the Company or its sublicensee. There are single digit royalty rates for licensed products and licensed services covered by a Valid Claim (as defined in the agreement) and dependent on whether Net Sales are greater than or less than/equal to $1,000,000,000, with Net Sales above that amount commanding a slightly higher percentage. In each case, the royalty percentage is lower before patent issuance in each jurisdiction. In the event that the licensed product or licensed service is not covered by a Valid Claim, the running royalty rates are reduced by fifty percent (50%). The royalty obligations continue on a country-by-country basis until the later of expiration of the last Valid Claim in each country or ten (10) years after the First Commercial Sale (as defined in UTSW2 Agreement) in each country.

GMCI — In November 2018, MAIA entered into a Global PLA and Sponsored Research Agreement ("SRA") for Collaborative Research and Jointly Owned Intellectual Property for the GMC1 Family of Compounds for the Treatment of Prostate Cancer with the University of Texas El Paso ("UTEP"). The SRA requires MAIA to reimburse UTEP for research program expenditures up to $46,000. The SRA for background Intellectual Property term is the last date of expiration or termination of the patent rights (2035). As amended, the SRA extended the research program to May 2020 since which point it has continued on an at-will basis.

MJC13 — In January 2019, MAIA entered into a Global PLA and SRA for Collaborative Research and Jointly Owned Intellectual Property for the MJC13 Family of Compounds for the Treatment of Prostate Cancer with UTEP. The SRA requires MAIA to reimburse UTEP for research program expenditures up to $46,000. As amended, the SRA extended the research program to June 2020, since which point it has continued on an at-will basis.

10. INCOME TAXES

The Company's net deferred tax assets consist of the following components:

	December 31,	
	2021	**2020**
Deferred tax assets:		
Net operating loss carryforwards	$ 3,013,721	$ 1,418,873
Stock-based compensation	1,800,935	1,132,473
Deferred compensation	31,718	156,717
Accrued bonus	109,673	222,339
Other	71,107	—
Total net deferred tax assets before valuation allowance	5,027,154	2,930,402
Valuation allowance	(5,027,154)	(2,930,402)
Net deferred tax asset	$ —	$ —

At December 31, 2021, the Company has unused U.S. federal and state net operating loss (“NOL”) carryforwards of $10.6 million that may be applied against future taxable income. The state NOL carryforwards begin to expire in 2030. The U.S. federal NOL carryforwards may be carried forward indefinitely, however U.S. federal NOL carryforwards arising after January 1, 2021, are limited to 80 percent of taxable income.

The use of the Company's NOL carryforwards may, however, be subject to limitations as a result of an ownership change. A corporation undergoes an "ownership change," in general, if a greater than 50% change (by value) in its equity ownership by one or more five-percent stockholders (or certain groups of non-five-percent stockholders) over a three-year period occurs. After such an ownership change, the corporation's use of its pre-change NOL carryforwards and other pre-change tax attributes to offset its post-change income is subject to an annual limitation determined by the equity value of the corporation on the date the ownership change occurs multiplied by a rate determined monthly by the Internal Revenue Service.

If an ownership change occurs and if the Company earns net taxable income, the Company's ability to use its pre-change NOLs to offset U.S. federal and taxable income would be subject to these limitations, which could potentially result in increased future tax liability compared to the tax liability the Company would incur if its use of NOL carryforwards were not so limited. In addition, for state income, franchise and similar tax purposes, there may be periods during which the use of NOL carryforwards is suspended or otherwise limited, which could accelerate or permanently increase the Company's state income, franchise, or similar taxes.

In accordance with ASC 740, the Company recorded a valuation allowance to fully offset the gross deferred tax asset, because it is not more likely than not that the Company will realize future benefits associated with these deferred tax assets at December 31, 2021 and 2020. The valuation allowance increased by approximately $2.1 million and $1.7 million during the years ended December 31, 2021 and 2020, respectively, mainly due to increases in the NOL carryforward and other deferred tax assets. The Company will continue to assess the realizability of the deferred tax assets at each interim and annual balance sheet date based upon actual and forecasted operating results.

No provision or benefit for U.S. federal or state income taxes has been recorded for the years ended December 31, 2021 and 2020, as the Company has incurred a net loss for all of the periods presented, and the Company has provided a full valuation allowance against its deferred tax assets.

The income tax expense (benefit) differs from the expense (benefit) that would result from applying federal statutory rates to loss before income taxes as follows:

	December 31,	
	2021	**2020**
Statutory federal income tax rate	21.0%	21.0%
State taxes, net of federal tax benefit	4.4%	6.5%
Stock-based compensation	(1.9)%	(2.6)%
Loss on extinguishment of debt	(3.9)%	— %
Other nondeductible expenses/(nontaxable income)	(2.8)%	0.2%
Change in valuation allowance	(16.8)%	(25.1)%
Income tax benefit	— %	— %

The Company accounts for uncertain tax positions in accordance with the provisions of ASC 740. When uncertain tax positions exist, the Company recognizes the tax benefit of tax positions to the extent that the benefit would more likely than not be realized assuming examination by the taxing authority. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position as well as consideration of the available facts and circumstances. The Company recognizes any interest and penalties accrued related to unrecognized tax benefits as income tax expense. The Company did not have any significant unrecognized tax benefits during the years ended December 31, 2021 and 2020. The Company files income tax returns in the U.S. federal jurisdiction and several U.S. States, and Australia. The Company's tax returns since inception remain open to examination by the taxing authorities.

11. SUBSEQUENT EVENTS

Exercise of MAIA Warrants

During January 2022, 61,111 warrants were exercised, resulting in a total of 61,111 shares of MAIA common stock issued for proceeds of approximately $110,000.

Extension of MAIA Warrant Exercise Periods

In January 2022, the Company and certain warrant holders executed waivers related to the acceptance and approval of an amendment to the holders' warrant agreements originally issued between May 6, 2020 and February 26, 2021 in connection with the Company's issuance of convertible notes. The amendment will remove the IPO expiration provision from the warrant agreements, and the warrants shall only be exercisable, in whole or in part, during the exercise period ending on earliest to occur of: (a) various dates in 2028 as stated within the warrant agreements; or (b) immediately prior to the closing of a change of control.

Sales of MAIA Common Stock

During January and February 2022, the Company sold 263,729 shares of common stock at $9.00 per share for gross proceeds of $2,373,561 before transaction costs and expenses.

MAIA Option Exercises

In February 2022, two employees exercised a total of 26,500 stock options, resulting in proceeds of $47,700.

MAIA Option Grants

During March 2022, the Company issued 102,792 stock options to employees and consultants, with a weighted average exercise price of $9.00 per share.

Shares of Common Stock

MAIA Biotechnology, Inc.

PRELIMINARY PROSPECTUS

ThinkEquity

,2022

Through and including , 2022 (the 25th day after the date of this offering), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

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 SEC registration fee, the FINRA filing fee and the Nasdaq listing fee.

SEC registration fee	$	
FINRA filing fee	$	
Initial Nasdaq listing fee	$	*
Accounting fees and expenses	$	*
Legal fees and expenses	$	*
Transfer agent's and registrar's fees and expenses	$	*
Printing and engraving expenses	$	*
Non-accountable expenses to underwriters	$	*
Miscellaneous fees	$	*
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 amended and restated certificate of incorporation provides 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 amended and restated bylaws will authorize the indemnification of our officers and directors, consistent with Section 145 of the DGCL, as amended. Reference is made to Section 102(b)(7) of the DGCL, which enables a corporation in its original certificate of incorporation or an amendment thereto to eliminate or limit the personal liability of a director for violations of the director's fiduciary duty, except (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the DGCL, which provides for liability of directors for unlawful payments of dividends of unlawful stock purchase or redemptions or (iv) for any transaction from which a director derived an improper personal benefit.

We intend to enter into indemnification agreements with each of our directors and officers that will be in effect upon the completion of this offering. 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

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 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.

Set forth below is information regarding shares of capital stock issued by us within the past three years. Also included is the consideration received by us for such shares and information relating to the section of the Securities Act, or rule of the SEC, under which exemption from registration was claimed.

(a) Issuance of Common Stock

In March 2019 through June 2019, we issued and sold 246,668 shares of our common stock with an aggregate principal amount of $444,000.

In October and November 2019, we issued and sold 873,725 shares of our common stock with an aggregate principal amount of $1.573 million.

During July through October 2021, we issued and sold 772,563 shares of our common stock with an aggregate principal amount of approximately $6.2 million.

In September 2021, we issued 1,375,228 shares of our common stock as a result of the automatic conversion of the convertible notes referenced in Item 15(b) below.

During January and February 2022, we issued and sold 263,729 shares of our common stock with an aggregate principal amount of approximately $2.4 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 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) Issuance of Convertible Notes & Warrants

In August 2019, we issued and sold a convertible promissory note with a principal amount of $10,000, which converted into 2,259 shares of our common stock on September 30, 2021.

In May 2020 through December 2020, we issued and sold convertible promissory notes with an aggregate principal amount of $610,000, which converted into 108,132 shares of our common stock on September 30, 2021, and warrants to purchase 54,066 shares of our common stock at $6.00 per share, for an aggregate purchase price of $324,396.

In February 2021 through June 2021, we issued and sold convertible promissory notes with an aggregate principal amount of $7.39 million, which converted into 1,264,837 shares of our common stock on September 30, 2021, and warrants to purchase 632,423 shares of our common stock at $6.00 per share, for an aggregate purchase price of $3,794,508.

No underwriters were involved in the foregoing issuances of securities. The securities described in this section (b) 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 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.

(c) Stock Option Grants, Option Exercises, Warrant Grants and Warrant Exercises

Between January 1, 2019 and December 31, 2021, we have granted to our employees, officers, directors and other persons who provide services to us options to purchase up to 5,336,753 shares of common stock under the 2018 Stock Option Plan and the Amended and Restated 2020 Stock Option Plan, at a weighted average exercise price of $2.26 per share. 5,000 of these options were exercised at a weighted average exercise price of $1.80. 1,749,568 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 1,594,733 shares of our common stock at $3.65 per share, which expire at various dates through September 2030 and vested upon issuance. 283,616 of these warrants were exercised at a weighted average exercise price of $1.87.

No underwriters were involved in the foregoing issuances of securities. The issuances of stock options described in this paragraph (c) 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 Statement Schedules.

(a) Exhibits.

Exhibit Number	Description of Document
1.1*	Form of Underwriting Agreement (including the form of Lock-Up Agreement).
3.1	Amended and Restated Certificate of Incorporation of MAIA Biotechnology, Inc.
3.2	Amended and Restated Certificate of Incorporation of MAIA Biotechnology, Inc. to be in effect upon completion of the offering.
3.3	Amended and Restated Bylaws of MAIA Biotechnology, Inc.
3.4	Amended and Restated Bylaws of MAIA Biotechnology, Inc. to be in effect upon completion of the offering.
4.1	Specimen Certificate representing shares of Common Stock.
4.2	Form of Warrant.
4.3*	Form of Representative's Warrant (included in Exhibit 1.1).
5.1	Opinion of Loeb & Loeb LLP.
10.1†	Supply and Non-Exclusive License Agreement between the Company and Regeneron Pharmaceuticals, Inc. dated February 1, 2021.
10.2†	Patent & Technology License Agreement between the Company and The Board of Regents of The University of Texas System on behalf of The University of Texas Southwestern Medical Center dated December 8, 2020.
10.3†	Patent & Technology License Agreement between the Company and The Board of Regents of The University of Texas System on behalf of The University of Texas Southwestern Medical Center dated December 23, 2020.
10.4+	Employment Agreement between Vlad Vitoc and the Company signed August 2, 2022.
10.5+	Employment Agreement between Joseph F. McGuire and the Company signed August 10, 2022.
10.6+	Employment Agreement between Mihail Obrocea and the Company signed August 2, 2022.
10.7+	Form of Indemnification Agreement between the Company and each of its directors and executive officers.
10.8+	MAIA Biotechnology, Inc. 2018 Stock Option Plan.
10.9+	MAIA Biotechnology, Inc. Amended & Restated 2020 Equity Incentive Plan.
10.10+	MAIA Biotechnology, Inc. 2021 Equity Incentive Plan.
14.1	Code of Business Conduct and Ethics of MAIA Biotechnology, Inc.
21.1	List of Subsidiaries of the Registrant.
23.1	Consent of Loeb & Loeb LLP (included in Exhibit 5.1).
23.2	Consent of EisnerAmper LLP, Independent Registered Public Accounting Firm.
24.1	Powers of Attorney (included on signature page to this registration statement).
107	Calculation of Filing Fee Tables

* To be filed by amendment.

+ Indicates management contract or compensatory plan.

† Pursuant to Item 601(b)(10) of Regulation S-K, certain portions of this exhibit have been omitted (indicated by "[***]") because the Registrant has determined that the information is not material and is the type that the Registrant treats as private or confidential.

(b) Financial Statement Schedules.

See index to financial statements on page F-1. All schedules have been omitted because they are not required or are not applicable.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriters, at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters 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 of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Chicago, State of Illinois, on April 8, 2022.

MAIA BIOTECHNOLOGY, INC.

By: /s/ Vlad Vitoc
Name: Vlad Vitoc
Title: Chief Executive Officer and Chairman

POWER OF ATTORNEY

We, the undersigned officers and directors of MAIA Biotechnology, Inc., hereby severally constitute and appoint Vlad Vitoc and Joseph McGuire, 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 re-substitution in each of them for him or her and in his or her 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.

Name	Title	Date
/s/ Vlad Vitoc Vlad Vitoc	Chairman and Chief Executive Officer (Principal Executive Officer)	April 8, 2022
/s/ Joseph F. McGuire Joseph F. McGuire	Chief Financial Officer (Principal Financial Officer)	April 8, 2022
/s/ Steven Chaouki Steven Chaouki	Director	April 8, 2022
/s/ Ramiro Guerrero Ramiro Guerrero	Director	April 8, 2022
/s/ Louie Ngar Yee Louie Ngar Yee	Director	April 8, 2022
/s/ Cristian Luput Cristian Luput	Director	April 8, 2022
/s/ Stan V. Smith Stan V. Smith	Director	April 8, 2022
/s/ Laurentiu Vlad Laurentiu Vlad	Director	April 8, 2022

Exhibit 3.1

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

MAIA BIOTECHNOLOGY, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

MAIA Biotechnology, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the **"General Corporation Law"),**

DOES HEREBY CERTIFY:

1. That the name of this corporation is MAIA Biotechnology, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on August 3, 2018.

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the 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 Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is MAIA Biotechnology, Inc. (the **"Corporation").**

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The purpose of the Corporation is to engage in any lawful business or activity for which corporations may be organized under the General Corporation Law and, in general, to possess and exercise all the powers and privileges granted by the General Corporation Law, any other law of the State of Delaware, or the Certificate of Incorporation, together with any powers incidental thereto, so far as such powers and privileges are necessary or convenient to the conduct, promotion, or attainment of the business or purposes of the Corporation.

FOURTH: This Corporation is authorized to issue two classes of shares of stock, which shall be designated, respectively, "Common Stock'' and "Preferred Stock." The total number of shares that the Corporation is authorized to issue is 100,000,000 shares. The number of shares of Common Stock authorized is 30,000,000 shares, $0.0001 par value per share. The number of shares of Preferred Stock authorized is 70,000,000 shares, $0.0001 par value per share. The rights, privileges, preferences and restrictions of the Preferred Stock shall be as set forth in one or more

resolutions providing for the issuance of such stock adopted by the Corporation's Board of Directors pursuant to authority expressly vested in it by this Article FOURTH"

FIFTH: The Board of Directors of the Corporation, subject to any rights of the holders of shares of any class or series of preferred stock of the Corporation, shall be classified with respect to the time for which they severally hold office into three classes, as nearly equal in number as possible. The Board of Directors may assign members of the Board already in office to the Classified Board, which assignments shall become effective at the same time the Classified Board becomes effective. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board, with the number of directors in each class to be divided as nearly equal as reasonably possible. One class's ("Class I") term will expire at the 2020 annual meeting of the stockholders, another class's ("Class II") term will expire at the 2021 annual meeting of the stockholders, and another class's ("Class III") term will expire at the 2022 annual meeting of stockholders; provided that the term of each Director shall continue until the election and qualification of a successor and be subject to such Director's earlier death, resignation or removal. Thereafter, at each annual meeting of stockholders of the Corporation, subject to any rights of the holders of shares of any class or series of preferred stock of the Company, the successors of the Directors whose term expires at that meeting shall be elected to hold office for a term expiring at the annual meeting of stockholders held in the third year following the year of their election.

SIXTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter, and repeal the bylaws of the Corporation, subject to the power of the stockholders of the Corporation to alter or repeal any bylaw whether adopted by the stockholders or otherwise.

SEVENTH: Unless and except to the extent that the bylaws of the Corporation shall so require, the election of directors of the Corporation need not be by written ballot.

EIGHTH: To the fullest extent permitted by the General Corporation Law, as the same may be amended from time to time, 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 is hereafter amended to authorize, with or without the approval of a corporation's stockholders, further reductions in the liability of the Corporation's directors for breach of fiduciary duty, then a director of the Corporation shall not be liable for any such breach to the fullest extent permitted by the General Corporation Law, as so amended. Any repeal or modification of this Article EIGHTH, or the adoption of any provision of the Corporation's Certificate of Incorporation inconsistent with this Article EIGHTH, shall only be prospective and shall not adversely affect the rights under this Article EIGHTH in effect at the time of the alleged occurrence of any action or omission to act giving rise to liability.

NINTH: To the fullest extent permitted by applicable laws of the State of Delaware, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers, employees, and other agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification), through bylaw provisions, agreements with any such director, officer, employee or other agent, or other person, 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, subject only to

limits created by the provisions of applicable law (statutory or non- statutory), with respect to actions for breach of duty to a corporation, its stockholders, and others. Any repeal or modification of any of the foregoing provision of this Article NINTH, by amendment of this Article NINTH or by operation of law, shall not adversely affect any right or protection of a director, officer, employee or other agent or other person 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, officer, or agent occurring prior to such repeal or modification.

TENTH: Except as provided in the last sentence of Article EIGHTH and Article NINTH, the Corporation reserves the right at any time, and from time to time, to amend, alter, change, or repeal any provision contained in this Certificate of Incorporation, and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted, in the manner now or hereafter prescribed by law; and all rights, preferences, and privileges of whatsoever nature conferred upon stockholders, directors or any other persons whomsoever by and pursuant to this Certificate of Incorporation in its present form or as hereafter amended are granted subject to the rights reserved in this article.

ELEVENTH: Meetings of stockholders and meetings of the board of directors may be held within or without the State of Delaware, as may be determined from time to time by the Board of Directors. Furthermore, the Board of Directors may, in its sole discretion, determine that the meeting of stockholders or meeting of the board of directors shall not be held at any place, but may instead be held solely by means of remote communication (i.e., conference call, Internet meeting, etc.). The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of 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.

TWELFTH: Any action required or permitted by the General Corporation Law to be taken at any annual or special meeting of stockholders of a corporation may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be 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 thereon were present and voted (unless the Bylaws require an alternate minimum number of votes for a particular action), and such consent or consents shall be delivered to the corporation by delivery to its registered office in the State of Delaware, its principal place of business in Chicago 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 the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Delivery made to its principal place of business or an officer or agent may be by hand, regular mail, facsimile, e-mail or similar electronic transmission.

THIRTEENTH: Any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by that number of Directors 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 Directors entitled to vote thereon were present and voted, and such consent or consents shall be delivered to an officer or agent of the corporation by hand, regular mail, facsimile, e-mail or similar electronic transmission.

* * *

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 Restated Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 11th day of March, 2020.

By: /s/ Vlad Vitoc
Name: Vlad Vitoc
Title: President and Chief Executive Officer

I hereby certify this is a true and accurate copy of the Amended and Restated Certificate of Incorporation, which was duly approved by the requisite number of shareholders as of March 11, 2020. Signature pages of the shareholders approving this Amended and Restated Certificate of Incorporation are maintained in DocuSign.

/s/ Leigh-Ann Durant
Leigh-Ann Durant
Secretary of MAIA Biotechnology, Inc.

Exhibit 3.2

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

MAIA BIOTECHNOLOGY, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

MAIA Biotechnology, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the **"DGCL"),**

DOES HEREBY CERTIFY:

1. That the name of this corporation is MAIA Biotechnology, Inc., and that this corporation was originally incorporated pursuant to the DGCL on August 3, 2018.

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the 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 Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is MAIA Biotechnology, Inc. (the **"Corporation").**

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The purpose of the Corporation is to engage in any lawful business or activity for which corporations may be organized under the DGCL and, in general, to possess and exercise all the powers and privileges granted by the DGCL, any other law of the State of Delaware, or the Certificate of Incorporation, together with any powers incidental thereto, so far as such powers and privileges are necessary or convenient to the conduct, promotion, or attainment of the business or purposes of the Corporation.

FOURTH: This Corporation is authorized to issue two classes of shares of stock, which shall be designated, respectively, "Common Stock'' and "Preferred Stock." The total number of shares that the Corporation is authorized to issue is 100,000,000 shares. The number of shares of Common Stock authorized is 70,000,000 shares, $0.0001 par value per share. The number of shares of Preferred Stock authorized is 30,000,000 shares, $0.0001 par value per share. The rights, privileges, preferences and restrictions of the Preferred Stock shall be as set forth in one or more resolutions providing for the issuance of such stock adopted by the Corporation's Board of Directors pursuant to authority expressly vested in it by this Article FOURTH"

FIFTH: The Directors, subject to any rights of the holders of shares of any class or series of preferred stock of the Corporation, shall be classified with respect to the time for which they severally hold office into three classes, as nearly equal in number as possible. The Board of Directors may assign members of the Board already in office to a particular class. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board. The term of each Director shall continue until the election and qualification of a successor and be subject to such Director's earlier death, resignation or removal. At each annual meeting of stockholders of the Corporation, subject to any rights of the holders of shares of any class or series of preferred stock of the Company, the successors of the Directors whose term expires at that meeting shall be elected to hold office for a term expiring at the annual meeting of stockholders held in the third year following the year of their election.

SIXTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter, and repeal the bylaws of the Corporation, subject to the power of the stockholders of the Corporation to alter or repeal any bylaw whether adopted by the stockholders or otherwise.

SEVENTH: Unless and except to the extent that the bylaws of the Corporation shall so require, the election of directors of the Corporation need not be by written ballot.

EIGHTH: To the fullest extent permitted by the DGCL, as the same may be amended from time to time, 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 DGCL is hereafter amended to authorize, with or without the approval of a corporation's stockholders, further reductions in the liability of the Corporation's directors for breach of fiduciary duty, then a director of the Corporation shall not be liable for any such breach to the fullest extent permitted by the DGCL, as so amended. Any repeal or modification of this Article EIGHTH, or the adoption of any provision of the Corporation's Certificate of Incorporation inconsistent with this Article EIGHTH, shall only be prospective and shall not adversely affect the rights under this Article EIGHTH in effect at the time of the alleged occurrence of any action or omission to act giving rise to liability.

NINTH: To the fullest extent permitted by applicable laws of the State of Delaware, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers, employees, and other agents of the Corporation (and any other persons to which DGCL permits the Corporation to provide indemnification), through bylaw provisions, agreements with any such director, officer, employee, consultant or other agent, or other person, vote of stockholders or disinterested directors, or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the DGCL, subject only to limits created by the provisions of applicable law (statutory or non- statutory), with respect to actions for breach of duty to a corporation, its stockholders, and others. Any repeal or modification of any of the foregoing provision of this Article NINTH, by amendment of this Article NINTH or by operation of law, shall not adversely affect any right or protection of a director, officer, employee or other agent or other person 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, officer, or agent occurring prior to such repeal or modification.

TENTH: Except as provided in the last sentence of Article EIGHTH and Article NINTH, the Corporation reserves the right at any time, and from time to time, to amend, alter, change, or repeal any provision contained in this Certificate of Incorporation, and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted, in the manner now or hereafter prescribed by law; and all rights, preferences, and privileges of whatsoever nature conferred upon stockholders, directors or any other persons whomsoever by and pursuant to this Certificate of Incorporation in its present form or as hereafter amended are granted subject to the rights reserved in this article.

ELEVENTH: Meetings of stockholders and meetings of the board of directors may be held within or without the State of Delaware, as may be determined from time to time by the Board of Directors. Furthermore, the Board of Directors may, in its sole discretion, determine that the meeting of stockholders or meeting of the board of directors shall not be held at any place, but may instead be held solely by means of remote communication (i.e., conference call, Internet meeting, etc.). The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of 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.

No action shall be taken by the stockholders of the Corporation except at an annual or special meeting of stockholders called in accordance with the bylaws of the Corporation, and no action shall be taken by the stockholders of the Corporation by written consent or by electronic transmission.

TWELFTH: Any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing setting forth the action so taken shall be signed by all of the Directors or committee members, as applicable, and such consent or consents shall be delivered to an officer or agent of the corporation by hand, regular mail, facsimile, e-mail or similar electronic transmission.

THIRTEENTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) shall be the sole and exclusive forum for the following types of actions or proceedings under Delaware statutory or common law (i) any derivative action or proceeding brought on behalf of the Corporation; (ii) any action or proceeding asserting a claim of breach of a fiduciary duty owed by any current or former director, officer or other employee of the Corporation, to the Corporation or the Corporation's stockholders; (iii) any action or proceeding asserting a claim against the Corporation or any current or former director, officer or other employee of the Corporation, arising out of or pursuant to any provision of the DGCL, this Certificate of Incorporation or the Bylaws (as each may be amended from time to time) or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware; (iv) any action or proceeding to interpret, apply, enforce or determine the validity of this Certificate of Incorporation or the Bylaws (including any right, obligation, or remedy thereunder); (v) any action or proceeding as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware; (vi) any action by any director, officer or agent of the

Corporation for indemnification pursuant to this Certificate of Incorporation, the Bylaws or any indemnification agreements; and (v) any action asserting a claim against the Corporation or any director, officer or other employee of the Corporation, governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. In any action as to which the Court of Chancery of the State of Delaware determines that there is an indispensable party not subject to the personal jurisdiction of the Court of Chancery of the State of Delaware (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery of the State of Delaware within ten (10) days following such determination), in which case the United States District Court for the District of Delaware or other state courts of the State of Delaware, as applicable, shall, to the fullest extent permitted by law, be the sole and exclusive forum for any such claims. This Article XII shall not apply to suits brought to enforce a duty or liability created by the Securities Act of 1933, as amended (the **"Securities Act"**), the Securities Exchange Act of 1934, as amended (the **"Exchange Act"**), or any other claim for which the federal courts have exclusive jurisdiction. Unless the Corporation consents in writing to the selection of an alternative forum, the federal district courts of the District of Delaware shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act or the Exchange Act. Any person or entity purchasing or otherwise acquiring or holding any interest in any securities of the Corporation shall be deemed to have notice of and consented to the provisions of this Certificate of Incorporation generally and this Article XII in particular.

* * *

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 DGCL.

4. That this Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this Corporation's Restated Certificate of Incorporation, has been duly adopted in accordance with Sections 228, 242 and 245 of the DGCL.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this day of , 2022.

By: _____
Name: Vlad Vitoc
Title: President and Chief Executive Officer

I hereby certify this is a true and accurate copy of the Amended and Restated Certificate of Incorporation, which was duly approved by the requisite number of shareholders as of November , 2021. Signature pages of the shareholders approving this Amended and Restated Certificate of Incorporation are maintained in DocuSign.

_____
[ ]
Secretary of MAIA Biotechnology, Inc.

Exhibit 3.3

AMENDED AND RESTATED BYLAWS

OF

MAIA BIOTECHNOLOGY, INC.

(the "Corporation")

1. Stockholders

(a) Annual Meeting. Annual meetings of stockholders may be held within or without the State of Delaware, as may be determined from time to time by the Board of Directors. Furthermore, the Board of Directors may, in its sole discretion, determine that the meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication. Any other proper business may be transacted at the annual meeting. If no date for the annual meeting is established or said meeting is not held on any date established as provided above, a special meeting in lieu thereof may be held or there may be action by written consent of the stockholders on matters to be voted on at the annual meeting, and such special meeting or written consent shall have for the purposes of these Bylaws or otherwise all the force and effect of an annual meeting.

(b) Special Meetings. Special meetings of stockholders may be called by the Chief Executive Officer, if one is elected, or, if there is no Chief Executive Officer, a President, Secretary or by the Board of Directors. Special meetings of the stockholders may also be called upon delivery to the Secretary of the Corporation of one or more written demands for a special meeting of the stockholders describing the purposes of that meeting and signed and dated by the holders of at least twenty-five percent (25%) of all the votes entitled to be cast on any issue proposed to be considered at that meeting. The call for the meeting shall state the place, date, hour and purposes of the meeting. Only the purposes specified in the notice of special meeting shall be considered or dealt with at such special meeting.

(c) Notice of Meetings. Whenever stockholders are required or permitted to take any action at a meeting, a notice stating the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present and vote at such meeting, and, in the case of a special meeting, the purpose or purposes of the meeting, shall be given by the Secretary (or other person authorized by these Bylaws or by law) not less than ten (10) nor more than sixty (60) days before the meeting to each stockholder entitled to vote thereat and to each stockholder who, under the Certificate of Incorporation or under these Bylaws is entitled to such notice. If mailed, notice is given when deposited in the mail, postage prepaid, directed to such stockholder at such stockholder's address as it appears in the records of the Corporation. Without limiting the manner by which notice otherwise may be effectively given to stockholders, any notice to stockholders may be given by electronic transmission in the manner provided in Section 232 of the Delaware General Corporation Law (the "DGCL").

If a meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place, if any, 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 adjourned meeting are announced at the meeting at which the adjournment is taken, except that if the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

(d) Quorum. The holders of a majority in interest of all stock issued, outstanding and entitled to vote at a meeting, present in person or represented by proxy, shall constitute a quorum. Any meeting may be adjourned from time to time by a majority of the votes properly cast upon the question, whether or not a quorum is present. The stockholders present at a duly constituted meeting may continue to transact business until adjournment notwithstanding the withdrawal of enough stockholders to reduce the voting shares below a quorum.

(e) Voting and Proxies. Each stockholder entitled to vote at any meeting of stockholders shall be entitled to one vote for each share of stock held by such stockholder which has voting power upon the matter in question. Each stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder by either written proxy or by a transmission permitted by Section 212(c) of the DGCL, but no proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period or is irrevocable and coupled with an interest. Proxies shall be filed with the Secretary of the meeting, or of any adjournment thereof. Except as otherwise limited therein, proxies shall entitle the persons authorized thereby to vote at any adjournment of such meeting.

(f) Action at Meeting.

(i) Subject to subsection (ii) below, when a quorum is present, any matter before the meeting shall be decided by vote of the holders of a majority of the shares of stock voting on such matter except as may be otherwise required by law, by the Shareholders Agreement, by the Certificate of Incorporation, or by these Bylaws. The Corporation shall not directly or indirectly vote any share of its own stock; provided, however, that the Corporation may vote shares which it holds in a fiduciary capacity to the extent permitted by law.

(ii) The Corporation may not, without the approval of those stockholders holding more than seventy-five percent of then-outstanding voting capital stock (the "Stockholder Supermajority"):

(A) do any act that would make it impossible to carry on the ordinary business of the Corporation, including, without limitation, make, execute or deliver any general assignment for the benefit of creditors, commence a bankruptcy action or receivership proceeding with respect to the Corporation or confess a judgment on behalf of the Corporation;

(B) effect a merger, consolidation or any other type of reorganization;

(C) lease, sell, transfer or otherwise dispose of all, or substantially all, of the assets; and

(D) dissolve, wind-up or liquidate the Corporation.

(g) Presiding Officer. Meetings of stockholders shall be presided over by the Chairman of the Board, if one is elected, or in his or her absence, the Vice Chairman of the Board, if one is elected, or if neither is elected or in their absence, the CEO or the President. The Board of Directors shall have the authority to appoint a temporary presiding officer to serve at any meeting of the stockholders if the Chairman of the Board, the Vice Chairman of the Board or a President is unable to do so for any reason.

(h) Conduct of Meetings. The Board of Directors may adopt by resolution such rules and regulations for the conduct of the meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the presiding officer of any meeting of stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the presiding officer 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 the chairman of the meeting shall determine; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. Unless and to the extent determined by the Board of Directors or the presiding officer of the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

(i) Action without a Meeting. Any action required or permitted by law or these Bylaws to be taken at any annual or special meeting of stockholders of a corporation may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be 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 thereon were present and voted (unless an alternate minimum number of votes is required in another section of these Bylaws), and such consent or consents shall be delivered to the corporation by delivery to its registered office in the State of Delaware, its principal place of business in Chicago 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 the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Delivery made to its principal place of business or an officer or agent may be by hand, regular mail, facsimile, e-mail or similar electronic transmission. Every written consent shall bear the date of signature and no written consent shall be effective unless, within sixty (60) days of the earliest dated consent delivered pursuant to these Bylaws, written consents signed by a

sufficient number of stockholders entitled to take action are delivered to the Corporation in the manner set forth in these Bylaws. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing.

(j) Stockholder Lists. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Nothing contained in this Section 1(j) shall require the Corporation to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least ten (10) days prior to the meeting in the manner provided by law. The list shall also be open to the examination of any stockholder during the whole time of the meeting as provided by law.

2. Directors

(a) Powers. The business of the Corporation shall be managed by or under the direction of the Board of Directors who may exercise all the powers of the Corporation except as otherwise provided by law, by the Certificate of Incorporation or by these Bylaws. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law, may exercise the powers of the full Board until the vacancy is filled.

(b) Number; Qualification. The number of directors which shall constitute the whole board shall be ten (inclusive of the Chairman and the Vice-Chairman). The number of Directors constituting the whole board may be changed by the vote of at least seventy-five percent of the number of current Directors ("Director Supermajority"). Directors need not be stockholders, but each Director shall be a natural person. If a person has served as a Director on the Board and has been removed for cause, such person shall not be eligible to serve on the Board in the future.

(c) Initial Directors and Chairmen; Terms; Classification of Board. The initial sole Director or the Incorporator shall serve as a Director and as the initial Chairman of the Board. Thereafter, the Chief Executive Officer shall serve as Chairman of the Board. The initial sole Director shall appoint the remaining Directors and the initial Vice Chairman of the Board by written resolution. The terms of the Chairman and Vice Chairman shall be as set forth in Section 2(d).

The Directors, subject to any rights of the holders of shares of any class or series of preferred stock of the Corporation, shall be classified with respect to the time for which they severally hold office into three classes, as nearly equal in number as possible. The Board of Directors may assign members of the Board already in office to the Classified Board, which assignments shall become effective at the same time the Classified Board becomes effective. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board.

Class I will consist of two Shareholder Directors (as defined and set forth in the Shareholders Agreement) and one Management Director (as defined and set forth in the Shareholders Agreement), and their terms will expire at the 2020 annual meeting of the stockholders. Class II will consist of one Shareholder Directors and two Management Director, and their terms will expire at the 2021 annual meeting of the stockholders. Class III will consist of one Shareholder Directors and one Management Director, and their terms will expire at the 2022 annual meeting of stockholders. For purposes of this section of the Bylaws, the Vice Chairman of the Board shall fall within the definition of a Management Director. Unless required by law, the Chairman of the Board shall not be assigned to any particular class of Directors.

Notwithstanding the above, the term of each Director shall continue until the election and qualification of a successor and be subject to such Director's earlier death, resignation or removal. Thereafter, at each annual meeting of stockholders of the Corporation, subject to any rights of the holders of shares of any class or series of preferred stock of the Company, the successors of the Directors whose term expires at that meeting shall be elected to hold office for a term expiring at the annual meeting of stockholders held in the third year following the year of their election.

(d) Chairman, Vice Chairman.

(i) Chairman - The initial sole Director or the Incorporator shall serve as the initial Chairman of the Board. Thereafter, the Chief Executive Officer shall serve as a Director and Chairman of the Board, holding a dedicated seat on the Board. A person must hold at least 100,000 shares of Common Stock of the Corporation in order to be eligible to serve as Chairman of the Corporation. The Chief Executive Officer shall continue to serve as Chairman until death, resignation or removal as Chief Executive Officer position either with or without cause by a vote of a Supermajority of the Directors (i.e., 75% of Directors). In the event the Chief Executive Officer dies, resigns or is removed and a successor Chief Executive Officer is not immediately appointed by the Board of Directors, the Directors then in office shall temporarily fill the vacancy in the Chairman position by electing from its members, by majority vote, an Interim Chairman who shall serve under the successor Chief Executive Officer is appointed and assumes the position of Chairman.

(ii) Vice Chairman - The initial sole Director shall appoint the initial Vice Chairman of the Board by written resolution. A person must serve as a Director and hold at least 100,000 shares of Common Stock of the Corporation in order to be eligible to serve as Vice Chairman. Such person need not be an officer of the Corporation.

(1) The initial Vice Chairman shall continue to service until death, resignation or removal from the Vice Chairman position either with or without cause by a majority vote of the Directors**.** In the event the initial Vice Chairman dies, resigns or is removed as Vice Chairman, the Chairman shall temporarily fill the vacancy in the Vice Chairman position by selecting from the remaining Directors an Interim Vice Chairman who shall serve until the next annual or special shareholders Meeting, at which time the Shareholders shall vote to elect a Vice Chairman to fill such vacancy in accordance with the requirements of the Shareholders Agreement.

(2) Thereafter, the Vice Chairman shall continue to service as Vice Chairman until death, resignation or removal from the Vice Chairman position either with or without cause by a majority vote of the Directors. Notwithstanding the above, given the classified Board provisions of these Bylaws, after being removed as Vice Chairman such person may continue to serve as a Director and may not be removed as a Director by a majority vote of the Directors unless there is cause.

(e) Vacancies in Board; Reduction of Board. A majority of the directors then in office, although less than a quorum, or a sole remaining Director, may, but is not required to, fill vacancies in the Board of Directors occurring for any reason and newly created directorships resulting from any increase in the authorized number of Directors until the next annual or special meeting of the Shareholders at which time the Shareholders shall vote to elect a Director or Directors to fill such vacancy or vacancies in accordance with the requirements of the Shareholders Agreement.

(f) Tenure. Except as otherwise provided by law and Sections 2(c) and 2(d) of these Bylaws, Directors shall hold office for a term of three years or until their death, resignation or removal as addressed in Section 2(g) of these Bylaws. Any director may resign at any time upon notice given in writing or by electronic transmission to the Corporation. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

(g) Removal. To the extent permitted by law, any director may be removed from office only with cause by vote of the holders of a majority of the shareholders entitled to vote in the election of directors.

(h) Meetings. Regular and special meetings of the board of directors may be held within or without the State of Delaware, as may be determined from time to time by the Board of Directors. Furthermore, the Board of Directors may, in its sole discretion, determine that the meeting of the board of directors shall not be held at any place, but may instead be held solely by means of remote communication (i.e., conference call, Internet meeting, etc.). Special meetings of the Board of Directors may be called, orally or in writing, by the Chief Executive Officer, if one is elected, or, if there is no Chief Executive Officer, the President, or by two or more Directors, designating the time, date and place thereof.

(i) Notice of Meetings. Notice of the time, date and place of all regular and special meetings of the Board of Directors shall be given to each director by the Secretary, or Assistant Secretary, or in case of the death, absence, incapacity or refusal of such persons, by the officer or one of the directors calling the meeting. Notice shall be given to each director in person, by telephone, or by facsimile, electronic mail or other form of electronic communications, sent to such director's business or home address or email at least twenty-four (24) hours in advance of the meeting, or by written notice mailed to such director's business or home address at least forty-eight (48) hours in advance of the meeting.

(j) Quorum. At any meeting of the Board of Directors, a majority of the total number of directors shall constitute a quorum for the transaction of business. Less than a quorum

may adjourn any meeting from time to time and the meeting may be held as adjourned without further notice.

(k) Action at Meeting. At any meeting of the Board of Directors at which a quorum is present, unless otherwise provided in the following sentence, a majority of the directors present may take any action on behalf of the Board of Directors If there are two (2) or fewer Directors, any action to be taken by the Board of Directors shall require the approval of all Directors.

(l) 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, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by that number of Directors 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 Directors entitled to vote thereon were present and voted, and such consent or consents shall be delivered to an officer or agent of the corporation by hand, regular mail, facsimile, e-mail or similar electronic transmission. Such consents shall be filed with the records of the meetings of the Board of Directors.

(m) Committees. The Board of Directors may, by resolution passed by a majority of the Directors, establish one or more committees, each committee to consist of one or more directors. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

Any such committee, to the extent permitted by law and to the extent provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to the following: (i) approving or adopting, or recommending to the stockholders, any action or matter expressly required by the DGCL to be submitted to stockholders for approval or (ii) adopting, amending or repealing any provision of these Bylaws.

Except as the Board of Directors may otherwise determine, any such committee may make rules for the conduct of its business, but in the absence of such rules its business shall be conducted so far as possible in the same manner as is provided in these Bylaws for the Board of Directors. All members of such committees shall hold their committee offices at the pleasure of the Board of Directors, and the Board may abolish any committee at any time.

3. Officers

(a) Enumeration. The officers of the Corporation shall consist of a Chief Executive Officer, a Secretary, and such other officer positions, including, without limitation a

President, a Chief Business Officer, Chief Scientific Officer, Chief Medical Officer, a Chief Financial Officer and a Chief Operating Officer, and such other officer positions as the Board of Directors may determine and authorize from time to time.

(b) Appointment. Any officer position created by the Board of Directors shall be filled as follows. The initial Chief Executive Officer shall be chosen by the Board of Directors at its annual meeting or at any other meeting, or by written consent of the Board of Directors. In the event the Chief Executive Officer dies, resigns or is removed pursuant to Section 3(e) below, a successor shall be chosen in the same way. All other officers shall be appointed by the Chief Executive Officer.

(c) Qualification. No officer need be a stockholder or Director. Any two or more offices may be held by the same person. Any officer may be required by the Board of Directors to give bond for the faithful performance of such officer's duties in such amount and with such sureties as the Board of Directors may determine.

(d) Tenure; Terms. The Chief Executive Officer shall hold office for a term of three years, and until such officer's successor is elected and qualified or until such officer's earlier death, resignation or removal. Such term shall automatically be renewed unless a Director Supermajority votes to not renew the incumbent Chief Executive Officer prior to the end of his or her current term. The Chief Executive Officer's three-year term shall be deemed to commence on the date the Board of Director elects such person as provided in Section 3(b) of these Bylaws above. All other officers shall serve for such duration, upon such conditions, as may be provided by the Chief Executive Officer. Any officer may resign by delivering his or her written resignation to the Corporation, and such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event. Nothing in these Bylaws shall be construed to limit any officer's right, set forth in any written contract between such officer and the Corporation, to damages for a termination in breach of such written contract.

(e) Removal. A Director Supermajority may remove the Chief Executive Officer with or without cause at any time. The Chief Executive Officer may remove any other officer with or without cause in the Chief Executive Officer's discretion.

(f) Vacancies. Any vacancy in the office of Chief Executive Officer may be filled for the unexpired portion of the term by the Board of Directors by majority vote. Any vacancy in any other office shall be filled by the Chief Executive Officer.

(g) Chairman of the Board and Vice Chairman. The Chairman of the Board of Directors shall preside at all meetings of the stockholders and the Board of Directors. The Chairman of the Board shall have such other powers and shall perform such duties as the Board of Directors may from time to time designate. Unless otherwise provided by the Board of Directors, in the absence of the Chairman of the Board, the Vice Chairman of the Board shall preside at all meetings of the stockholders and the Board of Directors. The Vice Chairman of the Board shall have such other powers and shall perform such duties as the Board of Directors may from time to time designate.

(h) Powers and Duties. The Chief Executive Officer shall have such powers and shall perform such duties as the Board of Directors may from time to time designate. All other officers shall have such powers and shall perform such duties as provided by the Chief Executive Officer. The Chief Executive Officer shall report to the Board of Directors. The other Officers shall report to the Chief Executive Officer.

(i) Secretary and Assistant Secretaries. The Secretary shall record the proceedings of all meetings of the stockholders and the Board of Directors (including committees of the Board) in books kept for that purpose. In the absence of the Secretary from any such meeting a person designated by the Chairman of the Board, shall record the proceedings thereof. The Secretary shall have such other duties and powers as may be designated from time to time by the Board of Directors. Any Assistant Secretary, if any, shall have such powers and perform such duties as the Board of Directors may from time to time designate.

(j) Other Powers and Duties. Subject to these Bylaws, each officer of the Corporation shall have in addition to the duties and powers specifically set forth in these Bylaws, such duties and powers as are customarily incident to such officer's office, and such duties and powers as may be designated from time to time by the Board of Directors.

4. Capital Stock

(a) Uncertificated Stock. All shares of the Corporation shall be uncertificated, as provided under Delaware law. A record shall be kept of the respective names of the persons, firms or corporations owning the stock of the Corporation, the number of shares held by such persons, firms or corporations and the respective dates of issuance, and in case of cancellation, the respective dates of cancellation. Within a reasonable time after the issuance or transfer of uncertificated stock and upon the request of a stockholder, the corporation shall send to the record owner thereof a written notice that shall set forth the name of the corporation, that the corporation is organized under the laws of Delaware, the name of the stockholder, the number and class (and the designation of the series, if any) of the shares, and any restrictions on the transfer or registration of such shares of stock imposed by the corporation's certificate of incorporation, these bylaws, any agreement among stockholders or any agreement between stockholders and the corporation. The Corporation shall be permitted to issue fractional shares.

(b) Terms Set by Board. The Board shall have authority to adopt a Resolution of the Board providing for the creation and issuance of stock rights and options and state the terms upon which, including the time or times which may be limited or unlimited in duration, at or within which, and the consideration (including a formula by which such consideration may be determined) and for which any such shares may be acquired from the corporation upon the exercise of any such rights or options**.** In every case, such terms shall be set forth or incorporated by reference in the instrument or instruments evidencing such rights or options. A formula by which such consideration may be determined may include or be made dependent upon facts ascertainable outside the formula, provided the manner in which such facts shall operate upon the formula is clearly and expressly set forth in the formula or in the resolution approving the formula. In the absence of actual fraud in the transaction, the judgment of the Directors as to the consideration for the issuance of such rights or options and the sufficiency thereof shall be conclusive.

(c) Transfers. Subject to any restrictions on transfer, shares of stock may be transferred on the books of the Corporation by a duly executed stock transfer power or other proper transfer instructions from the registered owner of such uncertificated shares.

(d) Record Holders. Except as may otherwise be required by law, by the Certificate of Incorporation or by these Bylaws, the Corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect thereto, regardless of any transfer, pledge or other disposition of such stock, until the shares have been transferred on the books of the Corporation in accordance with the requirements of these Bylaws. It shall be the duty of each stockholder to notify the Corporation of such stockholder's post office address.

(e) Record Date. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not precede the date on which it is established, and which shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting, more than ten (10) days after the date on which the record date for stockholder consent without a meeting is established, nor more than sixty (60) days prior to any other action. In such case only stockholders of record on such record date shall be so entitled notwithstanding any transfer of stock on the books of the Corporation after the record date.

If no record date is fixed, (i) 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 next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held, (ii) the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is necessary, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in this state, to its principal place of business, or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded, and (iii) the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

5. Indemnification

(a) Definitions. For purposes of this Section 5:

(i) "Corporate Status" describes the status of a person who is serving or has served (A) as a Director of the Corporation, (B) as an Officer of the Corporation, (C) as a Non-Officer Employee of the Corporation, or (D) as a director, partner, trustee, officer, employee or agent of any other corporation, partnership, limited liability company, joint venture, trust, employee benefit plan, foundation, association, organization or other legal entity for which such person is or was serving at the request of the Corporation. For purposes of this Section 5(a)(i), a Director, Officer or Non-Officer Employee of the

Corporation who is serving or has served as a director, partner, trustee, officer, employee or agent of a Subsidiary shall be deemed to be serving at the request of the Corporation. Notwithstanding the foregoing, "Corporate Status" shall not include the status of a person who is serving or has served as a director, officer, employee or agent of a constituent corporation absorbed in a merger or consolidation transaction with the Corporation with respect to such person's activities prior to said transaction, unless specifically authorized by the Board of Directors or the stockholders of the Corporation;

(ii) "Director" means any person who serves or has served the Corporation as a director on the Board of Directors of the Corporation;

(iii) "Disinterested Director" means, with respect to each Proceeding in respect of which indemnification is sought hereunder, a Director of the Corporation who is not and was not a party to such Proceeding;

(iv) "Expenses" means all reasonable attorney fees, retainers, court costs, transcript costs, fees of expert witnesses, private investigators and professional advisors (including, without limitation, accountants and investment bankers), travel expenses, duplicating costs, printing and binding costs, costs of preparation of demonstrative evidence and other courtroom presentation aids and devices, costs incurred in connection with document review, organization, imaging and computerization, telephone charges, postage, delivery service fees, and all other disbursements, costs or expenses of the type customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, settling or otherwise participating in, a Proceeding;

(v) "Liabilities" means judgments, damages, liabilities, losses, penalties, excise taxes, fines and amounts paid in settlement;

(vi) "Non-Officer Employee" means any person who serves or has served as an employee or agent of the Corporation, but who is not or was not a Director or Officer;

(vii) "Officer" means any person who serves or has served the Corporation as an officer of the Corporation appointed by the Board of Directors of the Corporation;

(viii) "Proceeding" means any threatened, pending or completed action, suit, arbitration, alternate dispute resolution mechanism, inquiry, investigation, administrative hearing or other proceeding, whether civil, criminal, administrative, arbitrative or investigative; and

(ix) "Subsidiary" shall mean any corporation, partnership, limited liability company, joint venture, trust or other entity of which the Corporation owns (either directly or through or together with another Subsidiary of the Corporation) either (i) a general partner, managing member or other similar interest or (ii) (A) 50% or more of the voting power of the voting capital equity interests of such corporation, partnership, limited liability company, joint venture or other entity, or (B) 50% or more of the outstanding

voting capital stock or other voting equity interests of such corporation, partnership, limited liability company, joint venture or other entity.

(b) Indemnification of Directors and Officers. Subject to the operation of Section 5(d) of these Bylaws, each Director and Officer shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the DGCL, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), and to the extent authorized in subsections (i) through (iv) of this Section 5(b).

(i) Actions, Suits and Proceedings Other than By or In the Right of the Corporation. Each Director and Officer shall be indemnified and held harmless by the Corporation against any and all Expenses and Liabilities that are incurred or paid by such Director or Officer or on such Director's or Officer's behalf in connection with any Proceeding or any claim, issue or matter therein (other than an action by or in the right of the Corporation), which such Director or Officer is, or is threatened to be made, a party to or participant in by reason of such Director's or Officer's Corporate Status, if such Director or Officer acted in good faith and in a manner such Director or Officer reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful.

(ii) Actions, Suits and Proceedings by or In the Right of the Corporation. Each Director and Officer shall be indemnified and held harmless by the Corporation against any and all Expenses that are incurred by such Director or Officer or on such Director's or Officer's behalf in connection with any Proceeding or any claim, issue or matter therein by or in the right of the Corporation, which such Director or Officer is, or is threatened to be made, a party to or participant in by reason of such Director's or Officer's Corporate Status, if such Director or Officer acted in good faith and in a manner such Director or Officer reasonably believed to be in or not opposed to the best interests of the Corporation; provided, however, that no indemnification shall be made under this Section 5(b)(ii) in respect of any claim, issue or matter as to which such Director or Officer shall have been finally adjudged by a court of competent jurisdiction to be liable to the Corporation, unless, and only to the extent that, the Court of Chancery or another court in which such Proceeding was brought shall determine upon application that, despite adjudication of liability, but in view of all the circumstances of the case, such Director or Officer is fairly and reasonably entitled to indemnification for such Expenses that such court deems proper.

(iii) Survival of Rights. The rights of indemnification provided by this Section 5(b) shall continue as to a Director or Officer after he or she has ceased to be a Director or Officer and shall inure to the benefit of his or her heirs, executors, administrators and personal representatives.

(iv) Actions by Directors or Officers. Notwithstanding the foregoing, the Corporation shall indemnify any Director or Officer seeking indemnification in connection with a Proceeding initiated by such Director or Officer only if such Proceeding (including

any parts of such Proceeding not initiated by such Director or Officer) was authorized in advance by the Board of Directors of the Corporation, unless such Proceeding was brought to enforce such Officer's or Director's rights to indemnification or, in the case of Directors, advancement of Expenses under these Bylaws in accordance with the provisions set forth herein.

(c) Indemnification of Non-Officer Employees. Subject to the operation of Section 5(d) of these Bylaws, each Non-Officer Employee may, in the discretion of the Board of Directors of the Corporation, be indemnified by the Corporation to the fullest extent authorized by the DGCL, as the same exists or may hereafter be amended, against any or all Expenses and Liabilities that are incurred by such Non-Officer Employee or on such Non-Officer Employee's behalf in connection with any threatened, pending or completed Proceeding, or any claim, issue or matter therein, which such Non-Officer Employee is, or is threatened to be made, a party to or participant in by reason of such Non-Officer Employee's Corporate Status, if such Non-Officer Employee acted in good faith and in a manner such Non-Officer Employee reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. The rights of indemnification provided by this Section 5(c) shall exist as to a Non-Officer Employee after he or she has ceased to be a Non-Officer Employee and shall inure to the benefit of his or her heirs, personal representatives, executors and administrators. Notwithstanding the foregoing, the Corporation may indemnify any Non-Officer Employee seeking indemnification in connection with a Proceeding initiated by such Non-Officer Employee only if such Proceeding was authorized in advance by the Board of Directors of the Corporation.

(d) Determination. Unless ordered by a court, no indemnification shall be provided pursuant to this Section 5 to a Director, to an Officer or to a Non-Officer Employee unless a determination shall have been made that such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal Proceeding, such person had no reasonable cause to believe his or her conduct was unlawful. Such determination shall be made by (i) a majority vote of the Disinterested Directors, even though less than a quorum of the Board of Directors, (ii) a committee comprised of Disinterested Directors, such committee having been designated by a majority vote of the Disinterested Directors (even though less than a quorum), (iii) if there are no such Disinterested Directors, or if a majority of Disinterested Directors so directs, by independent legal counsel in a written opinion, or (iv) by the stockholders of the Corporation.

(e) Advancement of Expenses to Directors Prior to Final Disposition.

(i) The Corporation shall advance all Expenses incurred by or on behalf of any Director in connection with any Proceeding in which such Director is involved by reason of such Director's Corporate Status within thirty (30) days after the receipt by the Corporation of a written statement from such Director requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by such Director and shall be preceded or accompanied by an undertaking by or on behalf of such Director to repay any Expenses so advanced if it shall ultimately be determined that such Director is not entitled to be indemnified against such Expenses. Notwithstanding the foregoing, the Corporation shall advance all Expenses incurred by or on behalf of any Director seeking

advancement of expenses hereunder in connection with a Proceeding initiated by such Director only if such Proceeding (including any parts of such Proceeding not initiated by such Director) was (A) authorized by the Board of Directors of the Corporation, or (B) brought to enforce such Director's rights to indemnification or advancement of Expenses under these Bylaws.

(ii) If a claim for advancement of Expenses hereunder by a Director is not paid in full by the Corporation within thirty (30) days after receipt by the Corporation of documentation of Expenses and the required undertaking, such Director may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim and if successful in whole or in part, such Director shall also be entitled to be paid the expenses of prosecuting such claim. The failure of the Corporation (including its Board of Directors or any committee thereof, independent legal counsel, or stockholders) to make a determination concerning the permissibility of such advancement of Expenses under this Section 5 shall not be a defense to an action brought by a Director for recovery of the unpaid amount of an advancement claim and shall not create a presumption that such advancement is not permissible. The burden of proving that a Director is not entitled to an advancement of expenses shall be on the Corporation.

(iii) In any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that the Director has not met any applicable standard for indemnification set forth in the DGCL.

(f) Advancement of Expenses to Officers and Non-Officer Employees Prior to Final Disposition.

(i) The Corporation may, at the discretion of the Board of Directors of the Corporation, advance any or all Expenses incurred by or on behalf of any Officer or any Non-Officer Employee in connection with any Proceeding in which such person is involved by reason of his or her Corporate Status as an Officer or Non-Officer Employee upon the receipt by the Corporation of a statement or statements from such Officer or Non-Officer Employee requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by such Officer or Non-Officer Employee and shall be preceded or accompanied by an undertaking by or on behalf of such person to repay any Expenses so advanced if it shall ultimately be determined that such Officer or Non-Officer Employee is not entitled to be indemnified against such Expenses.

(ii) In any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that the Officer or Non-Officer Employee has not met any applicable standard for indemnification set forth in the DGCL.

(g) Contractual Nature of Rights.

(i) The provisions of this Section 5 shall be deemed to be a contract between the Corporation and each Director and Officer entitled to the benefits hereof at any time while this Section 5 is in effect, in consideration of such person's past or current and any future performance of services for the Corporation. Neither amendment, repeal or modification of any provision of this Section 5 nor the adoption of any provision of the Certificate of Incorporation inconsistent with this Section 5 shall eliminate or reduce any right conferred by this Section 5 in respect of any act or omission occurring, or any cause of action or claim that accrues or arises or any state of facts existing, at the time of or before such amendment, repeal, modification or adoption of an inconsistent provision (even in the case of a proceeding based on such a state of facts that is commenced after such time), and all rights to indemnification and advancement of Expenses granted herein or arising out of any act or omission shall vest at the time of the act or omission in question, regardless of when or if any proceeding with respect to such act or omission is commenced. The rights to indemnification and to advancement of expenses provided by, or granted pursuant to, this Section 5 shall continue notwithstanding that the person has ceased to be a director or officer of the Corporation and shall inure to the benefit of the estate, heirs, executors, administrators, legatees and distributees of such person.

(ii) If a claim for indemnification hereunder by a Director or Officer is not paid in full by the Corporation within sixty (60) days after receipt by the Corporation of a written claim for indemnification, such Director or Officer may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim, and if successful in whole or in part, such Director or Officer shall also be entitled to be paid the expenses of prosecuting such claim. The failure of the Corporation (including its Board of Directors or any committee thereof, independent legal counsel, or stockholders) to make a determination concerning the permissibility of such indemnification under this Section 5 shall not be a defense to an action brought by a Director or Officer for recovery of the unpaid amount of an indemnification claim and shall not create a presumption that such indemnification is not permissible. The burden of proving that a Director or Officer is not entitled to indemnification shall be on the Corporation.

(iii) In any suit brought by a Director or Officer to enforce a right to indemnification hereunder, it shall be a defense that such Director or Officer has not met any applicable standard for indemnification set forth in the DGCL.

(h) Non-Exclusivity of Rights. The rights to indemnification and advancement of Expenses set forth in this Section 5 shall not be exclusive of any other right which any Director, Officer, or Non-Officer Employee may have or hereafter acquire under any statute, provision of the Certificate or these Bylaws, agreement, vote of stockholders or Disinterested Directors or otherwise.

(i) Insurance. The Corporation may maintain insurance, at its expense, to protect itself and any Director, Officer or Non-Officer Employee against any liability of any character asserted against or incurred by the Corporation or any such Director, Officer or Non-Officer Employee, or arising out of any such person's Corporate Status, whether or not the

Corporation would have the power to indemnify such person against such liability under the DGCL or the provisions of this Section 5.

(j) Other Indemnification. The Corporation's obligation, if any, to indemnify or provide advancement of Expenses to any person under this Section 5 as a result of such person serving, at the request of the Corporation, as a director, partner, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall be reduced by any amount such person may collect as indemnification or advancement of Expenses from such other corporation, partnership, joint venture, trust, employee benefit plan or enterprise (the "Primary Indemnitor"). Any indemnification or advancement of Expenses under this Section 5 owed by the Corporation as a result of a person serving, at the request of the Corporation, as a director, partner, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall only be in excess of, and shall be secondary to, the indemnification or advancement of Expenses available from the applicable Primary Indemnitor(s) and any applicable insurance policies.

(k) Exceptions. Notwithstanding any other provision of this Agreement, the Corporation shall not be obligated pursuant to the terms of these Bylaws:

(i) Excluded Action or Omissions. To indemnify any indemnified party for acts, omissions or transactions if a final decision by a court having jurisdiction in the matter shall determine that such indemnification is prohibited by applicable law.

(ii) Claims Initiated by any indemnified party. To indemnify Expenses or Liabilities or advance Expenses to any indemnified party with respect to claims initiated or brought voluntarily by such indemnified party and not by way of defense, except (i) with respect to actions or proceedings brought to establish or enforce a right to indemnification under these Bylaws or any other agreement or insurance policy or under the Corporation's Certificate of Incorporation now or hereafter in effect relating to such person's indemnification rights, (ii) in specific cases if the Board of Directors has approved the initiation or bringing of such claim, or (iii) as otherwise required under Section 145 of the Delaware General Corporation Law, regardless of whether indemnified party ultimately is determined to be entitled to such indemnification, advance Expense payment or insurance recovery, as the case may be.

(iii) Lack of Good Faith. To indemnify any indemnified party for any Expenses or Liabilities incurred by the indemnified party with respect to any proceeding instituted by the indemnified party to enforce or interpret its indemnification rights under the Bylaws, if a court of competent jurisdiction determines that such proceeding was not made in good faith or was frivolous.

(iv) Claims Under Section 16(b). To indemnify any indemnified party for the payment of profits arising from the purchase and sale by the indemnified party of securities in violation of Section 16(b) of the Securities Exchange Act of 1934, as amended, or any similar successor statute; provided that the Corporation shall advance Expenses in connection with the indemnified party's defense of a claim under

Section 16(b), which advances shall be repaid to the Corporation if it is ultimately determined that the indemnified party is not entitled to indemnification of such Expenses.

6. Miscellaneous Provisions

(a) Fiscal Year. Except as otherwise determined by the Board of Directors, the fiscal year of the Corporation shall end on December 31 of each year.

(b) Seal. The Board of Directors shall have power to adopt and alter the seal of the Corporation.

(c) Execution of Instruments. Subject to any limitations which may be set forth in a resolution of the Board of Directors, all deeds, leases, transfers, contracts, bonds, notes and other obligations to be entered into by the Corporation in the ordinary course of its business without director action may be executed on behalf of the Corporation by the Chief Executive Officer or the President, or by any other officer, employee or agent of the Corporation as the Board of Directors may authorize.

(d) Voting of Securities. Unless the Board of Directors otherwise provides, the Chief Executive Officer, the President, any Vice President or the Treasurer may waive notice of and act on behalf of this Corporation, or appoint another person or persons to act as proxy or attorney in fact for this Corporation with or without discretionary power and/or power of substitution, at any meeting of stockholders or shareholders of any other corporation or organization, any of whose securities are held by this Corporation.

(e) Resident Agent. The Board of Directors may appoint a resident agent upon whom legal process may be served in any action or proceeding against the Corporation.

(f) Corporate Records. The original or attested copies of the Certificate of Incorporation, Bylaws and records of all meetings of the incorporators, stockholders and the Board of Directors and the stock and transfer records, which shall contain the names of all stockholders, their record addresses and the amount of stock held by each, shall be kept at the principal office of the Corporation, at the office of its counsel, or at an office of its transfer agent. Any Shareholder shall have the right, from time to time during normal business hours and upon reasonable notice, to examine such records and to make copies and notes therefrom.

(g) Certificate of Incorporation. All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended and in effect from time to time.

(h) Amendments. These Bylaws may be altered, amended or repealed, and new Bylaws may be adopted, by the vote of the Stockholder Supermajority or by the vote of the Board Supermajority; provided, that (a) the Board of Directors may not alter, amend or repeal any provision of these Bylaws which by law, by the Certificate of Incorporation or by these Bylaws requires action by the stockholders and (b) any alteration, amendment or repeal of these Bylaws by the Board Supermajority and any new By-law adopted by the Board Supermajority may be altered, amended or repealed by the Stockholder Supermajority.

(i) Waiver of Notice. Whenever notice is required to be given under any provision of these Bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. 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. Neither the business to be transacted at, nor the purpose of, any meeting needs to be specified in any written waiver or any waiver by electronic transmission.

I hereby certify this is a true and accurate copy of the Amended and Restated Bylaws, which were duly approved by the Board of Directors, with an effective date as of February 29, 2020. Signature pages of the Directors approving this amended agreement are maintained in DocuSign.

/s/ Leigh-Ann Durant
Leigh-Ann Durant
Secretary of MAIA Biotechnology, Inc.

Exhibit 3.4

AMENDED AND RESTATED BYLAWS
OF
MAIA BIOTECHNOLOGY, INC.
(the "Corporation")

1. Stockholders' Meetings

Annual Meetings

(a) Annual Meetings Generally. Annual meetings of stockholders may be held within or without the State of Delaware, as may be determined from time to time by the Board of Directors. Furthermore, the Board of Directors may, in its sole discretion, determine that the meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication (video conference, telephone conference, etc.). The annual meeting of the stockholders, for the purpose of election of directors and for such other business as may properly come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors. If no date for the annual meeting is established or said meeting is not held on any date established as provided above, a special meeting in lieu thereof may be held, and such special meeting shall have for the purposes of these Bylaws or otherwise all the force and effect of an annual meeting. Nominations of persons for election to the Board of Directors and the proposal of business to be considered by the stockholders may be made at an annual meeting of stockholders: (i) pursuant to the Corporation's notice of meeting of stockholders (with respect to business other than nominations); (ii) brought specifically by or at the direction of the Board of Directors; or (iii) by any stockholder of the Corporation who was a stockholder of record at the time of giving the stockholder's notice provided for in Section 1(c) below, who is entitled to vote at the meeting and who complied with the notice procedures set forth in this Section 1. For the avoidance of doubt, clause (iii) above shall be the exclusive means for a stockholder to make nominations and submit other business (other than matters properly included in the Corporation's notice of meeting of stockholders and proxy statement under Rule 14a-8 under the Exchange Act of 1934, as amended, and the rules and regulations thereunder (the "Exchange Act")) before an annual meeting of stockholders.

(b) Permitted Business and Procedures. At an annual meeting of the stockholders, only such business shall be conducted as is a proper matter for stockholder action under Delaware law and as shall have been properly brought before the meeting.

(i) For nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 1(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the Corporation on a timely basis as set forth in Section 1(b)(iii) and must update and supplement such written notice on a timely basis as set forth in Section 1(c). Such stockholder's notice shall set forth: (A) as to each nominee such stockholder proposes to nominate at the meeting: (1) the name, age, business address and

residence address of such nominee; (2) the principal occupation or employment of such nominee and information with respect to the background and qualification of such nominee to serve as a director, as well as the background of any other person or entity on whose behalf the nomination is being made; (3) the class and number of shares of each class of capital stock of the Corporation that are owned of record and beneficially by such nominee; (4) the date or dates on which such shares were acquired and the investment intent of such acquisition; (5) a statement whether such nominee, if elected, intends to tender, promptly following such person's failure to receive the required vote for election or re-election at the next meeting at which such person would face election or re-election, an irrevocable resignation effective upon acceptance of such resignation by the Board of Directors; and (6) such other information concerning such nominee as would be required to be disclosed in a proxy statement soliciting proxies for the election of such nominee as a director in an election contest (even if an election contest is not involved), or that is otherwise required to be disclosed pursuant to Section 14 of the Exchange Act (including such person's written consent to being named as a nominee and to serving as a director if elected); and (B) the information required by Section 1(b)(iv). The Corporation may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the Corporation or that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such proposed nominee.

(ii) Other than proposals sought to be included in the Corporation's proxy materials pursuant to Rule 14a-8 under the Exchange Act, for business other than nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 1(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the Corporation on a timely basis as set forth in Section 1(b)(iii), and must update and supplement such written notice on a timely basis as set forth in Section 1(c). Such stockholder's notice shall set forth: (A) as to each matter such stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, and any material interest (including any anticipated benefit of such business to any Proponent (as defined in clause (iv) below) other than solely as a result of its ownership of the Corporation's capital stock, that is material to any Proponent individually, or to the Proponents in the aggregate) in such business of any Proponent; and (B) the information required by Section 1(b)(iv).

(iii) To be timely, the written notice required by Section 1(b)(i) or 1(b)(ii) must be received by the Secretary at the principal executive offices of the Corporation not later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the first anniversary of the date definitive proxy materials were first sent or given to stockholders with respect to the preceding year's annual meeting; provided, however, that, subject to the last sentence of this Section 1(b)(iii), in the event that the date of the annual meeting is advanced more than 30 days prior to or delayed by more than 30 days after the anniversary of the preceding year's annual meeting, notice by the stockholder to be timely must be so received not earlier than the close of business on the 120th day prior to such annual meeting and not later than the close of business on the later of the 90th day prior to such annual meeting or the tenth day

following the day on which public announcement of the date of such meeting is first made. In no event shall an adjournment or a postponement of an annual meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(iv) The written notice required by Section 1(b)(i) or (ii) shall also set forth, as of the date of the notice and as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (each, a "Proponent" and collectively, the "Proponents"): (A) the name and address of each Proponent, as they appear on the Corporation's books; (B) the class, series and number of shares of the Corporation that are owned beneficially and of record by each Proponent; (C) a description of any agreement, arrangement or understanding (whether oral or in writing) with respect to such nomination or proposal between or among any Proponent and any of its affiliates or associates, and any other parties (including their names) acting in concert, or otherwise under the agreement, arrangement or understanding, with any of the foregoing; (D) a representation that the Proponents are holders of record or beneficial owners, as the case may be, of shares of the Corporation entitled to vote at the meeting and intend to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice (with respect to a notice under Section 1(b)(i)) or to propose the business that is specified in the notice (with respect to a notice under Section (b)(ii)); (E) a representation as to whether the Proponents intend to deliver a proxy statement and form of proxy to holders of a sufficient number of holders of the Corporation's voting shares to elect such nominee or nominees (with respect to a notice under Section 1(b)(i)) or to carry such proposal (with respect to a notice under Section 1(b)(ii)); (F) to the extent known by any Proponent, the name and address of any other stockholder supporting the proposal on the date of such stockholder's notice; and (G) a description of all Derivative Transactions (as defined below) by each Proponent during the previous twelve-month period, including the date of the transactions and the class, series and number of securities involved in, and the material economic terms of, such Derivative Transactions. "Derivative Transaction" means any agreement, arrangement, interest or understanding entered into by, or on behalf or for the benefit of, any Proponent or any of its affiliates or associates, whether record or beneficial:

(A) the value of which is derived in whole or in part from the value of any class or series of shares or other securities of the Corporation;

(B) which otherwise provides any direct or indirect opportunity to gain or share in any gain derived from a change in the value of securities of the Corporation;

(C) the effect or intent of which is to mitigate loss, manage risk or benefit of security value or price changes; or

(D) which provides the right to vote or increase or decrease the voting power of, such Proponent, or any of its affiliates or associates, with respect to any securities of the Corporation,

which agreement, arrangement, interest or understanding may include, without limitation, any option, warrant, debt position, note, bond, convertible security, swap, stock appreciation right, short position, profit interest, hedge, right to dividends, voting agreement, performance-related fee or arrangement to borrow or lend shares (whether or not subject to payment, settlement, exercise or conversion in any such class or series), and any proportionate interest of such Proponent in the securities of the Corporation held by any general or limited partnership, or any limited liability company, of which such Proponent is, directly or indirectly, a general partner or managing member.

(c) Update of Notice. A stockholder providing written notice required by Section 1(b)(i) or (ii) shall update and supplement such notice in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the record date for the meeting and (ii) the date that is five business days prior to the meeting and, in the event of any adjournment or postponement thereof, five business days prior to such adjourned or postponed meeting. In the case of an update and supplement pursuant to clause (i) of this Section 1(c), such update and supplement shall be received by the Secretary at the principal executive offices of the Corporation not later than five business days after the record date for the meeting. In the case of an update and supplement pursuant to clause (ii) of this Section 1(c), such update and supplement shall be received by the Secretary at the principal executive offices of the Corporation not later than two business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two business days prior to such adjourned or postponed meeting.

(d) Stockholder Nominations upon Board Expansion. Notwithstanding anything in Section 1(b)(iii) to the contrary, in the event that the number of directors is increased and there is no public announcement of the appointment of a director, or, if no appointment was made, of the vacancy, made by the Corporation at least ten days before the last day a stockholder may deliver a notice of nomination in accordance with Section 1(b)(iii), a stockholder's notice required by this Section 1 that complies with the requirements in Section 1(b)(i), but not the timing requirements in Section 1(b)(iii), shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be received by the Secretary at the principal executive offices of the Corporation not later than the close of business on the tenth day following the day on which such public announcement is first made by the Corporation. A person shall not be eligible for election or re-election as a director unless the person is nominated in accordance with Sections 1(a)(ii) or (iii).

(e) Determination of Proper Procedure. Except as otherwise required by law, the chairperson of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made, or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws (including with respect to the timing and procedures of required notices), or the Proponent does not act in accordance with the representations in Sections 1(b)(iv)(D) and 1(b)(iv)(E), to declare that such proposal or nomination shall not be presented for stockholder action at the meeting and shall be disregarded, notwithstanding that proxies in respect of such nominations or such business may have been solicited or received.

(f) For purposes of this Section 1:

(i) "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act; and

(ii) "affiliates" and "associates" shall have the meanings set forth in Rule 405 under the Securities Act of 1933, as amended (the "Securities Act").

Special Meetings

(g) Special Meetings Generally. Special meetings of the stockholders of the Corporation may be called, for any purpose as is a proper matter for stockholder action under Delaware law, by (i) the Chairperson of the Board of Directors, (ii) the Chief Executive Officer, or (iii) the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption).

(h) Time and Place; Permitted Business. The Board of Directors shall determine the time and place, if any, of such special meeting. Upon determination of the time and place, if any, of the meeting, the Secretary shall cause a notice of meeting to be given to the stockholders entitled to vote, in accordance with the provisions of Section 1(k) of these By-laws. No business may be transacted at such special meeting otherwise than specified in the notice of meeting.

(i) Nominations at a Special Meeting. Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the Corporation who is a stockholder of record at the time of giving notice provided for in this paragraph, who shall be entitled to vote at the meeting and who delivers written notice to the Secretary of the Corporation setting forth the information required by Section 1(b)(i). In the event the Corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder of record may nominate a person or persons (as the case may be), for election to such position(s) as specified in the Corporation's notice of meeting, if written notice setting forth the information required by Section 1(b)(i) of these Bylaws shall be received by the Secretary at the principal executive offices of the Corporation not later than the close of business on the later of the 90th day prior to such meeting or the tenth day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting. The stockholder shall also update and supplement such information as required under Section 1(c). In no event shall an adjournment or a postponement of a special meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(j) Exchange Act Compliance. Notwithstanding the foregoing provisions of this Section 1, a stockholder must also comply with all applicable requirements of the Exchange

Act with respect to matters set forth in this Section 1. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act; provided, however, that any references in these Bylaws to the Exchange Act are not intended to and shall not limit the requirements applicable to proposals and/or nominations to be considered pursuant to Section 1(a)(iii) or to nominations for the election to the Board of Directors to be considered pursuant to Section 1(i) of these Bylaws.

(k) Notice of Meetings. Except as otherwise provided by law, whenever stockholders are required or permitted to take any action at a meeting, a notice stating the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present and vote at such meeting, and, in the case of a special meeting, the purpose or purposes of the meeting, shall be given by the Secretary (or other person authorized by these Bylaws or by law) not less than ten (10) nor more than sixty (60) days before the meeting to each stockholder entitled to vote thereat and to each stockholder who, under the Certificate of Incorporation or under these Bylaws is entitled to such notice. If mailed, notice is given when deposited in the mail, postage prepaid, directed to such stockholder at such stockholder's address as it appears in the records of the Corporation. Without limiting the manner by which notice otherwise may be effectively given to stockholders, any notice to stockholders may be given by electronic transmission in the manner provided in Section 232 of the Delaware General Corporation Law (the "DGCL"). If sent via electronic transmission, notice is deemed given as of the sending time recorded at the time of transmission. Notice of the time, place, if any, and purpose of any meeting of stockholders may be waived in writing, signed by the person entitled to notice thereof, or by electronic transmission by such person, either before or after such meeting, and will be waived by any stockholder by the stockholder's attendance thereat in person, by remote communication, if applicable, or by proxy, except when the stockholder 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. Any stockholder so waiving notice of such meeting shall be bound by the proceedings of any such meeting in all respects as if due notice thereof had been given.

(l) Quorum; Adjournment. At all meetings of stockholders, except where otherwise provided by statute or by the Certificate of Incorporation, or by these Bylaws, the holders of a majority in interest of all stock issued, outstanding and entitled to vote at a meeting, present in person, by remote communication or represented by proxy duly authorized, shall constitute a quorum for the transaction of business. The stockholders present at a duly constituted meeting may continue to transact business until adjournment notwithstanding the withdrawal of enough stockholders to reduce the voting shares below a quorum. Any meeting may be adjourned from time to time by the chairperson of the meeting or by a majority of the votes present and properly cast upon the question, whether or not a quorum is present, but no other business shall be transacted at such meeting. At the adjourned meeting, the Corporation may transact any business that might have been transacted at the original meeting. If a meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place, if any, 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 adjourned meeting are announced at the meeting at which the adjournment is taken, except that if the adjournment is for more than thirty (30) days, or if after

the adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

(m) Voting and Proxies. For the purpose of determining those stockholders entitled to vote at any meeting of the stockholders, except as otherwise provided by law, only persons in whose names and shares stand on the stock records of the Corporation on the record date, as provided in Section 1(s) of these Bylaws, shall be entitled to vote at any meeting of stockholders. Each stockholder entitled to vote at any meeting of stockholders shall be entitled to one vote for each share of stock held by such stockholder which has voting power upon the matter in question. Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by either written proxy or by a transmission permitted by Section 212(c) of the DGCL, but no proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period or is irrevocable and coupled with an interest. Proxies shall be filed with the Secretary of the meeting, or of any adjournment thereof. Except as otherwise limited therein, proxies shall entitle the persons authorized thereby to vote at any adjournment of such meeting.

(n) Action at Meeting. Any matter before the meeting other than the election of directors shall be decided by the affirmative vote of the holders of a majority of the shares of stock present in person, by remote communication, if applicable, or represented by proxy at the meeting and voting on such matter, except as may be otherwise required by law or applicable stock exchange rules, the Certificate of Incorporation, or these Bylaws. Except as otherwise provided by law or applicable stock exchange rules, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the holders of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the election of directors. The Corporation shall not directly or indirectly vote any share of its own stock; provided, however, that the Corporation may vote shares which it holds in a fiduciary capacity to the extent permitted by law.

(o) Presiding Officer. Meetings of stockholders shall be presided over by the Chairman of the Board, if one is elected, or in his or her absence, the CEO or the President. The Board of Directors shall have the authority to appoint a temporary presiding officer to serve at any meeting of the stockholders if the Chairman of the Board, the CEO or President is unable to do so for any reason.

(p) Conduct of Meetings. The Board of Directors may adopt by resolution such rules and regulations for the conduct of the meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the presiding officer of any meeting of stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the presiding officer 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 the chairman of the meeting shall determine; (iv) restrictions on entry to the

meeting after the time fixed for the commencement thereof; (v) limitations on the time allotted to questions or comments by participants; and (vi) regulation of the opening and closing of the polls for balloting on matters that are to be voted on by ballot. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting. Unless and to the extent determined by the Board of Directors or the presiding officer of the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

(q) No Action Without Meeting. No action shall be taken by the stockholders except at an annual or special meeting of stockholders called in accordance with these Bylaws, and no action shall be taken by the stockholders by written consent.

(r) Stockholder Lists. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Nothing contained in this Section 1(s) shall require the Corporation to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least ten (10) days prior to the meeting in the manner provided by law (i) 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 (ii) during ordinary business hours, at the principal place of business of the Corporation. In the event that the Corporation determines to make the list available on an electronic network, the Corporation may take reasonable steps to ensure that such information is available only to stockholders of the Corporation. The list shall also be open to the examination of any stockholder during the whole time of the meeting as provided by law.

(s) Joint Owners of Stock. If shares or other securities having voting power stand of record in the names of two or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (i) if only one votes, his or her act binds all; (ii) if more than one votes, the act of the majority so voting binds all; (iii) if more than one votes, but the vote is evenly split on any particular matter, each faction may vote the securities in question proportionally, or may apply to the Delaware Court of Chancery for relief as provided in DGCL Section 217(b). If the instrument filed with the Secretary shows that any such tenancy is held in unequal interests, a majority or even-split for the purpose of subsection (iii) shall be a majority or even-split in interest.

(t) Inspectors of Election. The Board of Directors may, and if required by the DGCL shall, appoint one or more inspectors, who may also serve the Corporation in other capacities, including, without limitation, as officers, employees, agents or representatives, but who need not be stockholders, to act at meetings of stockholders and make a written report thereof. If inspectors are not so appointed, the chairman of the meeting may, and if required by the DGCL shall, appoint one or more inspectors. No person who is a candidate for office shall act as an inspector. In case any person appointed as an inspector fails to appear or fails or refuses to act, the

vacancy may be filled by appointment made by the Board of Directors in advance of the convening of the meeting, or at the meeting by the chairman of the meeting. Each inspector, before discharging his or her duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of such inspector's ability. The inspectors shall have the duties prescribed in the DGCL.

2. Directors

(a) Powers. The business of the Corporation shall be managed by or under the direction of the Board of Directors who may exercise all the powers of the Corporation except as otherwise provided by law, by the Certificate of Incorporation or by these Bylaws. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law, may exercise the powers of the full Board until the vacancy is filled.

(b) Number; Qualification. Except as otherwise restricted by the Certificate of Incorporation, the authorized number of directors of the Corporation shall be fixed from time to time by the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption). Directors need not be stockholders unless so required by the Certificate of Incorporation. If for any reason the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these Bylaws. If a person has served as a Director on the Board and has been removed for cause, such person shall not be eligible to serve on the Board in the future.

(c) Classification of Board; Terms. The Directors, subject to any rights of the holders of shares of any class or series of preferred stock of the Corporation, shall be classified with respect to the time for which they severally hold office into three classes, as nearly equal in number as possible. The Board of Directors may assign members of the Board already in office to a particular class. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board. The term of each Director shall continue until the election and qualification of a successor and be subject to such Director's earlier death, resignation or removal. At each annual meeting of stockholders of the Corporation, subject to any rights of the holders of shares of any class or series of preferred stock of the Company, the successors of the Directors whose term expires at that meeting shall be elected to hold office for a term expiring at the annual meeting of stockholders held in the third year following the year of their election.

(d) Chairman. The Chief Executive Officer shall serve as a Director and Chairman of the Board if elected to the Board. The Chief Executive Officer shall continue to serve as Chairman until death, resignation or removal as Chief Executive Officer position either with or without cause by a vote of a Supermajority of the Directors (i.e., 75% of Directors). In the event the Chief Executive Officer dies, resigns or is removed and a successor Chief Executive Officer is not immediately appointed by the Board of Directors, the Directors then in office shall temporarily fill the vacancy in the Chairman position by electing from its members, by majority vote, an Interim Chairman who shall serve under the successor Chief Executive Officer is appointed and assumes the position of Chairman. For clarity, the Chief Executive Officer's removal, as such, by the Board shall not constitute his removal from the Board, which can be accomplished only by the

stockholders, in accordance with law. The Chairman of the Board of Directors, if appointed and when present, shall preside at all meetings of the stockholders and the Board of Directors. The Chairman of the Board of Directors shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors shall designate from time to time.

(e) Vacancies. Unless otherwise provided in the Certificate of Incorporation or by applicable law, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors shall be filled by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director, and not by the stockholders, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified. A vacancy in the Board of Directors shall be deemed to exist under this Bylaw in the case of the death, removal or resignation of any director.

(f) Tenure. Except as otherwise provided by law and Sections 2(c) and 2(d) of these Bylaws, Directors shall hold office for a term of three years or until their death, resignation or removal as addressed in Section 2(g) of these Bylaws. Any director may resign at any time upon notice given in writing or by electronic transmission to the Corporation. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

(g) Removal. To the extent permitted by law, any director may be removed from office only with cause by vote of the holders of a majority of the voting power of the shares then entitled to vote in the election of directors.

(h) Resignation. Any director may resign at any time by delivering his or her notice in writing or by electronic transmission to the Secretary, such resignation to specify whether it will be effective at a particular time. If no such specification is made, the Secretary, in his or her discretion, may either (i) require confirmation from the director prior to deeming the resignation effective, in which case the resignation will be deemed effective upon receipt of such confirmation, or (ii) deem the resignation effective at the time of delivery of the resignation to the Secretary.

(i) Meetings. Regular and special meetings of the board of directors may be held within or without the State of Delaware, as may be determined from time to time by the Board of Directors. Furthermore, the Board of Directors may, in its sole discretion, determine that the meeting of the board of directors shall not be held at any place, but may instead be held solely by means of remote communication (i.e., conference call, Internet meeting, etc.). Special meetings of the Board of Directors may be called, orally, by telephone, by facsimile, electronic mail or other form of electronic communications or in writing, by the Chief Executive Officer, if one is elected, or, if there is no Chief Executive Officer, the President, or by a majority of the Directors, designating the time, date and place thereof.

(j) Notice of Meetings. Notice of the time, date and place of all regular and special meetings of the Board of Directors shall be given to each director by the Secretary, or Assistant Secretary, or in case of the death, absence, incapacity or refusal of such persons, by the officer or one of the directors calling the meeting. Notice shall be given to each director in person, by telephone, or by facsimile, electronic mail or other form of electronic communications, sent to such director's business or home address or email at least twenty-four (24) hours in advance of the meeting, or by written notice mailed to such director's business or home address at least forty-eight (48) hours in advance of the meeting.

(k) Quorum. At any meeting of the Board of Directors, a majority of the total number of directors shall constitute a quorum for the transaction of business. Less than a quorum may adjourn any meeting from time to time and the meeting may be held as adjourned without further notice.

(l) Action at Meeting. At any meeting of the Board of Directors at which a quorum is present, unless otherwise provided in the following sentence or unless a different vote may be required by law, the Certificate of Incorporation or these Bylaws, a majority of the directors present may take any action on behalf of the Board of Directors. If there are two (2) or fewer Directors, any action to be taken by the Board of Directors shall require the approval of all Directors.

(m) 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, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by that number of Directors 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 Directors entitled to vote thereon were present and voted, and such consent or consents shall be delivered to an officer or agent of the Corporation by hand, regular mail, facsimile, e-mail or similar electronic transmission. Such consents shall be filed with the records of the meetings of the Board of Directors.

(n) Fees and Compensation. Directors shall be entitled to such compensation for their services as may be approved by the Board of Directors, including, if so approved, by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, for attendance at each regular or special meeting of the Board of Directors and at any meeting of a committee of the Board of Directors. Nothing herein contained shall be construed to preclude any director from serving the Corporation in any other capacity as an officer, consultant, agent, employee, or otherwise and receiving compensation therefor.

(o) Committees Generally. The Board of Directors may, by resolution passed by a majority of the Directors, establish one or more committees, each committee to consist of one or more directors. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. Unless otherwise provided by the Board of Directors in the resolutions authorizing the creation of the committee, a majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee.

In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Except as the Board of Directors may otherwise determine, any such committee may make rules for the conduct of its business, but in the absence of such rules its business shall be conducted so far as possible in the same manner as is provided in these Bylaws for the Board of Directors. All members of such committees shall hold their committee offices at the pleasure of the Board of Directors, and the Board may abolish any committee at any time.

(p) Executive Committee. The Board of Directors may, by resolution passed by a majority of the Directors, appoint an Executive Committee which, to the extent permitted by law and to the extent provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it; provided, however, that neither the Executive Committee nor any other committee shall have the power or authority in reference to the following: (i) approving or adopting, or recommending to the stockholders, any action or matter expressly required by the DGCL to be submitted to stockholders for approval or (ii) adopting, amending or repealing any provision of these Bylaws.

(q) Organization. At every meeting of the directors, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the Chief Executive Officer (if a director), or, if a Chief Executive Officer is absent, the President (if a director), or if the President is absent, the most senior Vice President (if a director), or, in the absence of any such person, a chairperson of the meeting chosen by a majority of the directors present, shall preside over the meeting. The Secretary, or in his or her absence, any Assistant Secretary or other officer, director or other person directed to do so by the person presiding over the meeting, shall act as secretary of the meeting.

3. Officers

(a) Enumeration. The officers of the Corporation shall consist of a Chief Executive Officer, a Secretary, and such other officer positions, including, without limitation a President, a Chief Business Officer, Chief Scientific Officer, Chief Medical Officer, a Chief Financial Officer and a Chief Operating Officer, and such other officer positions and titles as the Board of Directors may determine and authorize from time to time. Any one person may hold any number of offices of the Corporation at any one time unless specifically prohibited therefrom by law. The salaries and other compensation of the officers of the Corporation shall be fixed by or in the manner designated by the Board of Directors.

(b) Appointment. Any officer position created by the Board of Directors shall be filled as follows. The Chief Executive Officer shall be chosen by the Board of Directors at its annual meeting or at any other meeting, or by written consent of the Board of Directors. In the event the Chief Executive Officer dies, resigns or is removed pursuant to Section 3(e) below, a successor shall be chosen in the same way. All other officers shall be appointed by the Chief Executive Officer.

(c) Qualification. No officer need be a stockholder or Director. Any two or more offices may be held by the same person. Any officer may be required by the Board of Directors to give bond for the faithful performance of such officer's duties in such amount and with such sureties as the Board of Directors may determine.

(d) Tenure; Terms. The Chief Executive Officer shall hold office for a term of three years, and until such officer's successor is elected and qualified or until such officer's earlier death, resignation or removal. Such term shall automatically be renewed unless a Director Supermajority votes to not renew the incumbent Chief Executive Officer prior to the end of his or her current term. The Chief Executive Officer's three-year term shall be deemed to commence on the date the Board of Director elects such person as provided in Section 3(b) of these Bylaws above. All other officers shall serve for such duration, upon such conditions, as may be provided by the Chief Executive Officer. Any officer may resign by delivering his or her written resignation to the Corporation, and such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event. Nothing in these Bylaws shall be construed to limit any officer's right, set forth in any written contract between such officer and the Corporation, to damages for a termination in breach of such written contract.

(e) Removal. A Director Supermajority may remove the Chief Executive Officer with or without cause at any time. The Chief Executive Officer may remove any other officer with or without cause in the Chief Executive Officer's discretion.

(f) Resignations. Any officer may resign at any time by giving notice in writing or by electronic transmission to the Board of Directors or to the Chief Executive Officer, or if no Chief Executive Officer is then serving, to the President or to the Secretary. Any such resignation shall be effective when received by the person or persons to whom such notice is given, unless a later time is specified therein, in which event the resignation shall become effective at such later time. Unless otherwise specified in such notice, the acceptance of any such resignation shall not be necessary to make it effective. Any resignation shall be without prejudice to the rights, if any, of the Corporation under any contract with the resigning officer.

(g) Vacancies. Any vacancy in the office of Chief Executive Officer may be filled for the unexpired portion of the term by the Board of Directors by majority vote. Any vacancy in any other office shall be filled by the Chief Executive Officer.

(h) Powers and Duties. The Chief Executive Officer shall have such powers and shall perform such duties as the Board of Directors may from time to time designate. All other officers shall have such powers and shall perform such duties as provided by the Chief Executive Officer. The Chief Executive Officer shall report to the Board of Directors. The other Officers shall report to the Chief Executive Officer.

(i) Chief Executive Officer. The Chief Executive Officer shall preside at all meetings of the stockholders and at all meetings of the Board of Directors (if a director), unless the Chairman of the Board of Directors has been appointed and is present. Unless an officer has been appointed Chief Executive Officer of the Corporation, the President shall be the Chief Executive Officer of the Corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the Corporation. To

the extent that a Chief Executive Officer has been appointed and no President has been appointed, all references in these Bylaws to the President shall be deemed references to the Chief Executive Officer. The Chief Executive Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors shall designate from time to time.

(j) Secretary and Assistant Secretaries. The Secretary shall attend and record the proceedings of all meetings of the stockholders and the Board of Directors (including committees of the Board) in books kept for that purpose. In the absence of the Secretary from any such meeting a person designated by the Chairman of the Board, shall record the proceedings thereof. The Secretary shall give notice in conformity with these Bylaws of all meetings of the stockholders and of all meetings of the Board of Directors and any committee thereof requiring notice. The Secretary shall have such other duties and powers as may be designated from time to time by the Board of Directors. Any Assistant Secretary, if any, shall have such powers and perform such duties as the Board of Directors may from time to time designate.

(k) Chief Financial Officer. The Chief Financial Officer shall keep or cause to be kept the books of account of the Corporation in a thorough and proper manner and shall render statements of the financial affairs of the Corporation in such form and as often as required by the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President. The Chief Financial Officer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the Corporation. The Chief Financial Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time. To the extent that a Chief Financial Officer has been appointed and no Treasurer has been appointed, all references in these Bylaws to the Treasurer shall be deemed references to the Chief Financial Officer. The President may direct the Treasurer, if any, or any Assistant Treasurer, or the controller or any assistant controller to assume and perform the duties of the Chief Financial Officer in the absence or disability of the Chief Financial Officer, and each Treasurer and Assistant Treasurer and each controller and assistant controller shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer shall designate from time to time.

(l) Other Powers and Duties. Subject to these Bylaws, each officer of the Corporation shall have in addition to the duties and powers specifically set forth in these Bylaws, such duties and powers as are customarily incident to such officer's office, and such duties and powers as may be designated from time to time by the Board of Directors.

(m) Execution of Corporate Instruments. Each officer of the Corporation may execute, affix the corporate seal and/or deliver, in the name and on behalf of the Corporation, deeds, mortgages, notes, bonds, contracts, agreements, powers of attorney, guarantees, settlements, releases, evidences of indebtedness, conveyances, or any other document or instrument that is authorized by the Board of Directors or is required to be executed in the ordinary course of business, except in cases where the execution, affixation of the corporate seal and/or delivery thereof shall be expressly and exclusively delegated by the Board of Directors to some other officer or agent of the Corporation.

4. Capital Stock

(a) Uncertificated or Certificated Stock. The shares of the Corporation shall be uncertificated, or shall be certificated if so provided by resolution or resolutions of the Board of Directors, each as provided under Delaware law. A record shall be kept of the respective names of the persons, firms or corporations owning the stock of the Corporation, the number of shares held by such persons, firms or corporations and the respective dates of issuance, and in case of cancellation, the respective dates of cancellation. Within a reasonable time after the issuance or transfer of uncertificated stock and upon the request of a stockholder, the Corporation shall send to the record owner thereof a written notice that shall set forth the name of the Corporation, that the Corporation is organized under the laws of Delaware, the name of the stockholder, the number and class (and the designation of the series, if any) of the shares, and any restrictions on the transfer or registration of such shares of stock imposed by the Corporation's Certificate of Incorporation, these Bylaws, any agreement among stockholders or any agreement between stockholders and the Corporation. The Corporation shall be permitted to issue fractional shares.

(b) Certificated Shares. Certificates for the shares of stock of the Corporation, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock represented by certificate in the Corporation shall be entitled to have a certificate signed by or in the name of the Corporation by the Chairman of the Board of Directors, the Chief Executive Officer, or the President or any Vice President and by the Chief Financial Officer, Treasurer or Assistant Treasurer or the Secretary or Assistant Secretary, certifying the number of shares owned by him in the Corporation. Any or all of the signatures on the certificate may be facsimiles. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued with the same effect as if he were such officer, transfer agent, or registrar at the date of issue.

(c) Lost Certificates. A new certificate or certificates shall be issued in place of any certificate or certificates theretofore issued by the Corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. The Corporation may require, as a condition precedent to the issuance of a new certificate or certificates, the owner of such lost, stolen, or destroyed certificate or certificates, or the owner's legal representative, to agree to indemnify the Corporation in such manner as it shall require or to give the Corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate alleged to have been lost, stolen, or destroyed.

(d) Terms Set by Board. The Board shall have authority to adopt a Resolution of the Board providing for the creation and issuance of stock rights and options and state the terms upon which, including the time or times which may be limited or unlimited in duration, at or within which, and the consideration (including a formula by which such consideration may be determined) and for which any such shares may be acquired from the Corporation upon the exercise of any such rights or options**.** In every case, such terms shall be set forth or incorporated by reference in the instrument or instruments evidencing such rights or options. A formula by which such consideration may be determined may include or be made dependent upon facts ascertainable outside the formula, provided the manner in which such facts shall operate upon the

formula is clearly and expressly set forth in the formula or in the resolution approving the formula. In the absence of actual fraud in the transaction, the judgment of the Directors as to the consideration for the issuance of such rights or options and the sufficiency thereof shall be conclusive.

(e) Transfers. Subject to any restrictions on transfer, shares of stock may be transferred on the books of the Corporation by a duly executed stock transfer power or other proper transfer instructions from the registered owner of such uncertificated shares. The Corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the Corporation to restrict the transfer of shares of stock of the Corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

(f) Record Holders. Except as may otherwise be required by law, by the Certificate of Incorporation or by these Bylaws, the Corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect thereto, regardless of any transfer, pledge or other disposition of such stock, until the shares have been transferred on the books of the Corporation in accordance with the requirements of these Bylaws. It shall be the duty of each stockholder to notify the Corporation of such stockholder's post office address.

(g) Record Date. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not precede the date on which it is established, and which shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting, more than ten (10) days after the date on which the record date for stockholder consent without a meeting is established, nor more than sixty (60) days prior to any other action. In such case only stockholders of record on such record date shall be so entitled, notwithstanding any transfer of stock on the books of the Corporation after the record date. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

(h) Transfer Agent and Registrar. The Board of Directors may appoint one (1) or more transfer agents and one (1) or more registrars, and may require any certificates representing shares to bear the signature of any such transfer agents or registrars.

(i) Voting Securities Owned by the Corporation. All stock and other securities of other corporations owned or held by the Corporation for itself, or for other parties in any capacity, shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors, or, in the absence of such authorization, by the Chairman of the Board of Directors, the Chief Executive Officer or the President.

5. Indemnification

(a) Definitions. For purposes of this Section 5:

(i) "Corporate Status" describes the status of a person who is serving or has served (A) as a Director of the Corporation, (B) as an Officer of the Corporation, (C) as a Non-Officer Employee of the Corporation, or (D) as a director, partner, trustee, officer, employee or agent of any other corporation, partnership, limited liability company, joint venture, trust, employee benefit plan, foundation, association, organization or other legal entity for which such person is or was serving at the request of the Corporation. For purposes of this Section 5(a)(i), a Director, Officer or Non-Officer Employee of the Corporation who is serving or has served as a director, partner, trustee, officer, employee or agent of a Subsidiary shall be deemed to be serving at the request of the Corporation. Notwithstanding the foregoing, "Corporate Status" shall not include the status of a person who is serving or has served as a director, officer, employee or agent of a constituent corporation absorbed in a merger or consolidation transaction with the Corporation with respect to such person's activities prior to said transaction, unless specifically authorized by the Board of Directors or the stockholders of the Corporation;

(ii) "Director" means any person who serves or has served the Corporation as a director on the Board of Directors of the Corporation;

(iii) "Disinterested Director" means, with respect to each Proceeding in respect of which indemnification is sought hereunder, a Director of the Corporation who is not and was not a party to such Proceeding;

(iv) "Expenses" means all reasonable attorney fees, retainers, court costs, transcript costs, fees of expert witnesses, private investigators and professional advisors (including, without limitation, accountants and investment bankers), travel expenses, duplicating costs, printing and binding costs, costs of preparation of demonstrative evidence and other courtroom presentation aids and devices, costs incurred in connection with document review, organization, imaging and computerization, telephone charges, postage, delivery service fees, and all other disbursements, costs or expenses of the type customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, settling or otherwise participating in, a Proceeding; "Expenses" will also include reasonable compensation for time spent by an indemnitee for which he or she is not compensated by the Company or any subsidiary or third party, but only if the rate of compensation and estimated time involved is approved by the directors of the Company who are not parties to any action with respect to which Expenses are incurred;

(v) "Liabilities" means judgments, damages, liabilities, losses, penalties, excise taxes, fines and amounts paid in settlement;

(vi) "Non-Officer Employee" means any person who serves or has served as an employee, consultant or agent of the Corporation, but who is not or was not a Director or Officer;

(vii) "Officer" means any person who serves or has served the Corporation as an officer of the Corporation appointed by the Board of Directors or the Chief Executive Officer;

(viii) "Proceeding" means any threatened, pending or completed action, suit, arbitration, alternate dispute resolution mechanism, inquiry, investigation, administrative hearing or other proceeding, whether civil, criminal, administrative, arbitrative or investigative; and

(ix) "Subsidiary" shall mean any corporation, partnership, limited liability company, joint venture, trust or other entity of which the Corporation owns (either directly or through or together with another Subsidiary of the Corporation) either (i) a general partner, managing member or other similar interest or (ii) (A) 50% or more of the voting power of the voting capital equity interests of such corporation, partnership, limited liability company, joint venture or other entity, or (B) 50% or more of the outstanding voting capital stock or other voting equity interests of such corporation, partnership, limited liability company, joint venture or other entity.

(b) Indemnification of Directors and Officers. Subject to the operation of Section 5(d) of these Bylaws, each Director and Officer shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the DGCL (and subject to the limitations therein), as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), and to the extent authorized in subsections (i) through (iv) of this Section 5(b); provided, however, that the Corporation may modify the extent of such indemnification by individual contracts with its Directors and Officers.

(i) Actions, Suits and Proceedings Other than By or In the Right of the Corporation. Each Director and Officer shall be indemnified and held harmless by the Corporation against any and all Expenses and Liabilities that are incurred or paid by such Director or Officer or on such Director's or Officer's behalf in connection with any Proceeding or any claim, issue or matter therein (other than an action by or in the right of the Corporation) or any action to enforce such Officer's or Director's rights to indemnification, which such Director or Officer is, or is threatened to be made, a party to or participant (including non-party witness) in by reason of such Director's or Officer's Corporate Status, if such Director or Officer acted in good faith and in a manner such Director or Officer reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal proceeding, did not in good faith believe his or her conduct was unlawful.

(ii) Actions, Suits and Proceedings by or In the Right of the Corporation. Each Director and Officer shall be indemnified and held harmless by the Corporation against any and all Expenses that are incurred by such Director or Officer or on such Director's or Officer's behalf in connection with any Proceeding or any claim, issue or matter therein by or in the right of the Corporation, which such Director or Officer is, or is threatened to be made, a party to or participant in by reason of such Director's or

Officer's Corporate Status, if such Director or Officer acted in good faith and in a manner such Director or Officer reasonably believed to be in or not opposed to the best interests of the Corporation; provided, however, that no indemnification shall be made under this Section 5(b)(ii) in respect of any claim, issue or matter as to which such Director or Officer shall have been finally adjudged by a court of competent jurisdiction to be liable to the Corporation, unless, and only to the extent that, the Court of Chancery or another court in which such Proceeding was brought shall determine upon application that, despite adjudication of liability, but in view of all the circumstances of the case, such Director or Officer is fairly and reasonably entitled to indemnification for such Expenses that such court deems proper.

(iii) Survival of Rights. The rights of indemnification provided by this Section 5(b) shall continue as to a Director or Officer after he or she has ceased to be a Director or Officer and shall inure to the benefit of his or her heirs, executors, administrators and personal representatives.

(iv) Actions by Directors or Officers. Notwithstanding the foregoing, the Corporation shall indemnify any Director or Officer seeking indemnification in connection with a Proceeding initiated by such Director or Officer only if such Proceeding (including any parts of such Proceeding not initiated by such Director or Officer) was authorized in advance by the Board of Directors of the Corporation, unless such Proceeding was brought to enforce such Officer's or Director's rights to indemnification or, in the case of Directors, advancement of Expenses under these Bylaws in accordance with the provisions set forth herein.

(c) Indemnification of Non-Officer Employees. Subject to the operation of Section 5(d) of these Bylaws, the Corporation shall have power to indemnify its other Non-Officer Employees and other agents as set forth in the DGCL or any other applicable law. The Board of Directors shall have the power to delegate the determination of whether indemnification shall be given to any such person except executive officers to such officers or other persons as the Board of Directors shall determine.

(d) Determination. Unless ordered by a court, no indemnification shall be provided pursuant to this Section 5 to a Director, to an Officer or to a Non-Officer Employee unless a determination shall have been made that such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal Proceeding, such person did not in good faith believe his or her conduct was unlawful. Such determination shall be made by (i) a majority vote of the Disinterested Directors, even though less than a quorum of the Board of Directors, (ii) a committee comprised of Disinterested Directors, such committee having been designated by a majority vote of the Disinterested Directors (even though less than a quorum), (iii) if there are no such Disinterested Directors, or if a majority of Disinterested Directors so directs, by independent legal counsel in a written opinion, or (iv) by the stockholders of the Corporation.

(e) Advancement of Expenses to Directors Prior to Final Disposition.

(i) The Corporation shall advance all Expenses incurred by or on behalf of any Director in connection with any Proceeding in which such Director is involved by

reason of such Director's Corporate Status within thirty (30) days after the receipt by the Corporation of a written statement from such Director requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by such Director and shall be preceded or accompanied by an undertaking by or on behalf of such Director to repay any Expenses so advanced if it shall ultimately be determined that such Director is not entitled to be indemnified against such Expenses. Notwithstanding the foregoing, the Corporation shall advance all Expenses incurred by or on behalf of any Director seeking advancement of expenses hereunder in connection with a Proceeding initiated by such Director only if such Proceeding (including any parts of such Proceeding not initiated by such Director) was (A) authorized by the Board of Directors of the Corporation, or (B) brought to enforce such Director's rights to indemnification or advancement of Expenses under these Bylaws.

(ii) If a claim for advancement of Expenses hereunder by a Director is not paid in full by the Corporation within thirty (30) days after receipt by the Corporation of documentation of Expenses and the required undertaking, such Director may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim and if successful in whole or in part, such Director shall also be entitled to be paid the expenses of prosecuting such claim. The failure of the Corporation (including its Board of Directors or any committee thereof, independent legal counsel, or stockholders) to make a determination concerning the permissibility of such advancement of Expenses under this Section 5 shall not be a defense to an action brought by a Director for recovery of the unpaid amount of an advancement claim and shall not create a presumption that such advancement is not permissible. The burden of proving that a Director is not entitled to an advancement of expenses shall be on the Corporation.

(iii) In any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that the Director has not met any applicable standard for indemnification set forth in the DGCL.

(f) Advancement of Expenses to Officers and Non-Officer Employees Prior to Final Disposition.

(i) The Corporation may, at the discretion of the Board of Directors of the Corporation, advance any or all Expenses incurred by or on behalf of any Officer or any Non-Officer Employee in connection with any Proceeding in which such person is involved by reason of his or her Corporate Status as an Officer or Non-Officer Employee upon the receipt by the Corporation of a statement or statements from such Officer or Non-Officer Employee requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by such Officer or Non-Officer Employee and shall be preceded or accompanied by an undertaking by or on behalf of such person to repay any Expenses so advanced if it shall ultimately be determined that such Officer or Non-Officer Employee is not entitled to be indemnified against such Expenses.

(ii) In any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that the Officer or Non-Officer Employee has not met any applicable standard for indemnification set forth in the DGCL.

(g) Contractual Nature of Rights.

(i) The provisions of this Section 5 shall be deemed to be a contract between the Corporation and each Director and Officer entitled to the benefits hereof at any time while this Section 5 is in effect, in consideration of such person's past or current and any future performance of services for the Corporation. Neither amendment, repeal or modification of any provision of this Section 5 nor the adoption of any provision of the Certificate of Incorporation inconsistent with this Section 5 shall eliminate or reduce any right conferred by this Section 5 in respect of any act or omission occurring, or any cause of action or claim that accrues or arises or any state of facts existing, at the time of or before such amendment, repeal, modification or adoption of an inconsistent provision (even in the case of a proceeding based on such a state of facts that is commenced after such time), and all rights to indemnification and advancement of Expenses granted herein or arising out of any act or omission shall vest at the time of the act or omission in question, regardless of when or if any proceeding with respect to such act or omission is commenced. The rights to indemnification and to advancement of expenses provided by, or granted pursuant to, this Section 5 shall continue notwithstanding that the person has ceased to be a director or officer of the Corporation and shall inure to the benefit of the estate, heirs, executors, administrators, legatees and distributees of such person.

(ii) If a claim for indemnification hereunder by a Director or Officer is not paid in full by the Corporation within sixty (60) days after receipt by the Corporation of a written claim for indemnification, such Director or Officer may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim, and if successful in whole or in part, such Director or Officer shall also be entitled to be paid the expenses of prosecuting such claim. The failure of the Corporation (including its Board of Directors or any committee thereof, independent legal counsel, or stockholders) to make a determination concerning the permissibility of such indemnification under this Section 5 shall not be a defense to an action brought by a Director or Officer for recovery of the unpaid amount of an indemnification claim and shall not create a presumption that such indemnification is not permissible. The burden of proving that a Director or Officer is not entitled to indemnification shall be on the Corporation.

(iii) In any suit brought by a Director or Officer to enforce a right to indemnification hereunder, it shall be a defense that such Director or Officer has not met any applicable standard for indemnification set forth in the DGCL.

(h) Non-Exclusivity of Rights. The rights to indemnification and advancement of Expenses set forth in this Section 5 shall not be exclusive of any other right which any Director, Officer, or Non-Officer Employee may have or hereafter acquire under any statute, provision of the Certificate or these Bylaws, agreement, vote of stockholders or Disinterested Directors or otherwise.

(i) Insurance. The Corporation may maintain insurance, at its expense, to protect itself and any Director, Officer or Non-Officer Employee against any liability of any character asserted against or incurred by the Corporation or any such Director, Officer or Non-Officer Employee, or arising out of any such person's Corporate Status, whether or not the Corporation would have the power to indemnify such person against such liability under the DGCL or the provisions of this Section 5.

(j) Repeal or Invalidation. Any repeal or modification of this Section 5 shall only be prospective and shall not affect the rights under this Bylaw in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the Corporation. If this Section 5 or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless indemnify each director and executive officer to the full extent not prohibited by any applicable portion of this Section 5 that shall not have been invalidated, or by any other applicable law. If this Section 5 shall be invalid due to the application of the indemnification provisions of another jurisdiction, then the Corporation shall indemnify each director and executive officer to the full extent under any other applicable law.

(k) Other Indemnification. The Corporation's obligation, if any, to indemnify or provide advancement of Expenses to any person under this Section 5 as a result of such person serving, at the request of the Corporation, as a director, partner, trustee, officer, employee, consultant or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall be reduced by any amount such person may collect as indemnification or advancement of Expenses from such other corporation, partnership, joint venture, trust, employee benefit plan or enterprise (the "Primary Indemnitor"). Any indemnification or advancement of Expenses under this Section 5 owed by the Corporation as a result of a person serving, at the request of the Corporation, as a director, partner, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall only be in excess of, and shall be secondary to, the indemnification or advancement of Expenses available from the applicable Primary Indemnitor(s) and any applicable insurance policies.

(l) Exceptions. Notwithstanding any other provision of this Agreement, the Corporation shall not be obligated pursuant to the terms of these Bylaws:

(i) Excluded Action or Omissions. To indemnify any indemnified party for acts, omissions or transactions if a final decision by a court having jurisdiction in the matter shall determine that such indemnification is prohibited by applicable law.

(ii) Claims Initiated by any indemnified party. To indemnify Expenses or Liabilities or advance Expenses to any indemnified party with respect to claims initiated or brought voluntarily by such indemnified party and not by way of defense, except (i) with respect to actions or proceedings brought to establish or enforce a right to indemnification under these Bylaws or any other agreement or insurance policy or under the Corporation's Certificate of Incorporation now or hereafter in effect relating to such person's indemnification rights, (ii) in specific cases if the Board of Directors has approved the initiation or bringing of such claim, or (iii) as otherwise required under Section 145 of the Delaware General Corporation Law, regardless of whether indemnified party ultimately is

determined to be entitled to such indemnification, advance Expense payment or insurance recovery, as the case may be.

(iii) Frivolous Claims. To indemnify any indemnified party for any Expenses or Liabilities incurred by the indemnified party with respect to any proceeding instituted by the indemnified party to enforce or interpret its indemnification rights under these Bylaws, if a court of competent jurisdiction determines that such proceeding was frivolous.

(iv) Claims Under Section 16(b). To indemnify any indemnified party for the payment of profits arising from the purchase and sale by the indemnified party of securities in violation of Section 16(b) of the Exchange Act or any similar successor statute; provided that the Corporation shall advance Expenses in connection with the indemnified party's defense of a claim under Section 16(b), which advances shall be repaid to the Corporation if it is ultimately determined that the indemnified party is not entitled to indemnification of such Expenses.

6. Dividends

(a) Declaration of Dividends. Dividends upon the capital stock of the Corporation, subject to the provisions of the Certificate of Incorporation and applicable law, if any, may be declared by the Board of Directors pursuant to law at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation and applicable law.

(b) Dividend Reserve. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the Board of Directors shall think conducive to the interests of the Corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created.

7. Miscellaneous Provisions

(a) Fiscal Year. Except as otherwise determined by the Board of Directors, the fiscal year of the Corporation shall end on December 31 of each year.

(b) Seal. The Board of Directors shall have power to adopt and alter the seal of the Corporation.

(c) Execution of Instruments. Subject to any limitations which may be set forth in a resolution of the Board of Directors, all deeds, leases, transfers, contracts, bonds, notes and other obligations to be entered into by the Corporation in the ordinary course of its business without director action may be executed on behalf of the Corporation by the Chief Executive Officer or the President, or by any other officer, employee or agent of the Corporation as the Board of Directors may authorize.

(d) Voting of Securities. Unless the Board of Directors otherwise provides, the Chief Executive Officer, the President, any Vice President or the Treasurer may waive notice of and act on behalf of this Corporation, or appoint another person or persons to act as proxy or attorney in fact for this Corporation with or without discretionary power and/or power of substitution, at any meeting of stockholders or shareholders of any other corporation or organization, any of whose securities are held by this Corporation.

(e) Resident Agent. The Board of Directors may appoint a resident agent upon whom legal process may be served in any action or proceeding against the Corporation.

(f) Corporate Records. The original or attested copies of the Certificate of Incorporation, Bylaws and records of all meetings of the incorporators, stockholders and the Board of Directors and the stock and transfer records, which shall contain the names of all stockholders, their record addresses and the amount of stock held by each, shall be kept at the principal office of the Corporation, at the office of its counsel, or at an office of its transfer agent. Any Shareholder shall have the right, from time to time during normal business hours and upon reasonable notice, to examine such records and to make copies and notes therefrom.

(g) Certificate of Incorporation. All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended and in effect from time to time.

(h) Amendments. Subject to the limitations set forth in Section 5(j) of these Bylaws or the provisions of the Certificate of Incorporation, the Board of Directors is expressly empowered to adopt, amend, or repeal these Bylaws. Any adoption, amendment or repeal of the Bylaws of the Corporation by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders also shall have power to adopt, amend or repeal these Bylaws; provided, however, that, in addition to any vote of the holders of any class or series of stock of the Corporation required by law or by the Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of 66.67% of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class.

(i) Forum. Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) shall be the sole and exclusive forum for the following types of actions or proceedings under Delaware statutory or common law (i) any derivative action or proceeding brought on behalf of the Corporation; (ii) any action or proceeding asserting a claim of breach of a fiduciary duty owed by any current or former director, officer or other employee of the Corporation, to the Corporation or the Corporation's stockholders; (iii) any action or proceeding asserting a claim against the Corporation or any current or former director, officer or other employee of the Corporation, arising out of or pursuant to any provision of the DGCL, the Certificate of Incorporation or these Bylaws (as each may be amended from time to time) or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware; (iv) any action or proceeding to interpret, apply, enforce or determine the validity of the

Certificate of Incorporation or these Bylaws (including any right, obligation, or remedy thereunder); (v) any action or proceeding as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware; and (vi) any action asserting a claim against the Corporation or any director, officer or other employee of the Corporation, governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. In any action as to which the Court of Chancery of the State of Delaware determines that there is an indispensable party not subject to the personal jurisdiction of the Court of Chancery of the State of Delaware (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery of the State of Delaware within ten (10) days following such determination), in which case the United States District Court for the District of Delaware or other state courts of the State of Delaware, as applicable, shall, to the fullest extent permitted by law, be the sole and exclusive forum for any such claims. This Section 7(i) shall not apply to suits brought to enforce a duty or liability created by the Securities Act, the Exchange Act, or any other claim for which the federal courts have exclusive jurisdiction. Unless the Corporation consents in writing to the selection of an alternative forum, the federal district courts of the District of Delaware shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act or the Exchange Act. Any person or entity purchasing or otherwise acquiring or holding any interest in any securities of the Corporation shall be deemed to have notice of and consented to the provisions of these Bylaws generally and this Section 7(i) in particular.

(j) Notices; Waiver.

(i) Written notice to stockholders of stockholder meetings shall be given as provided in Section 1(k) herein. Without limiting the manner by which notice may otherwise be given effectively to stockholders under any agreement or contract with such stockholder, and except as otherwise required by law, written notice to stockholders for purposes other than stockholder meetings may be sent by U.S. mail or nationally recognized overnight courier, or by facsimile, or by electronic mail or other electronic means.

(ii) Any notice required to be given to any director may be given by the method stated in clause (i) of this subsection or as otherwise provided in these Bylaws, with notice other than one that is delivered personally to be sent to such address as such director shall have filed in writing with the Secretary, or in the absence of such filing, to the last known address of such director.

(iii) An affidavit of mailing, executed by a duly authorized and competent employee of the Corporation or its transfer agent appointed with respect to the class of stock affected, or other agent, specifying the name and address or the names and addresses of the stockholder or stockholders, or director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall in the absence of fraud, be prima facie evidence of the facts therein contained.

(iv) It shall not be necessary that the same method of giving notice be employed in respect of all recipients of notice, but one permissible method may be

employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

(v) Whenever notice is required to be given, under any provision of law or of the Certificate of Incorporation or these Bylaws, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting that shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the Corporation is such as to require the filing of a certificate under any provision of the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

(vi) Except as otherwise prohibited under the DGCL, any notice given under the provisions of DGCL, the Certificate of Incorporation or these Bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Such consent shall have been deemed to have been given if such stockholder fails to object in writing to the Corporation within 60 days of having been given notice by the Corporation of its intention to send the single notice. Any consent shall be revocable by the stockholder by written notice to the Corporation.

(vii) Whenever notice is required to be given under any provision of these Bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. 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. Neither the business to be transacted at, nor the purpose of, any meeting needs to be specified in any written waiver or any waiver by electronic transmission.

ZQ|CERT#|COY|CLS|RGSTRY|ACCT#|TRANSTYPE|RUN#|TRANS#

COMMON STOCK

PAR VALUE $.0001

COMMON STOCK

Certificate Number

ZQ00000000

Shares

MAIA BIOTECHNOLOGY, INC.

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

THIS CERTIFIES THAT

MR SAMPLE & MRS. SAMPLE & MR SAMPLE & MRS. SAMPLE

SEE REVERSE FOR CERTAIN DEFINITIONS

CUSIP 552641 10 2

is the owner of

ZERO HUNDRED THOUSAND ZERO HUNDRED AND ZERO***

THIS CERTIFICATE IS TRANSFERABLE IN CITIES DESIGNATED BY THE TRANSFER AGENT, AVAILABLE ONLINE AT www.computershare.com

FULLY-PAID AND NON-ASSESSABLE SHARES OF COMMON STOCK OF

MAIA Biotechnology, Inc. (hereinafter called the "Company"), transferable on the books of the Company in person or by duly authorized attorney, upon surrender of this Certificate properly endorsed. This Certificate and the shares represented hereby, are issued and shall be held subject to all of the provisions of the Certificate of Incorporation, as amended, and the By-Laws, as amended, of the Company (copies of which are on file with the Company and with the Transfer Agent), to all of which each holder, by acceptance hereof, assents. This Certificate is not valid unless countersigned and registered by the Transfer Agent and Registrar.

Witness the facsimile seal of the Company and the facsimile signatures of its duly authorized officers.

DATED DD-MMM-YYYY

FACSIMILE SIGNATURE TO COME

President

MAIA BIOTECHNOLOGY, INC. CORPORATE SEAL August 1, 2018 DELAWARE

COUNTERSIGNED AND REGISTERED:
COMPUTERSHARE TRUST COMPANY, N.A.
TRANSFER AGENT AND REGISTRAR,

FACSIMILE SIGNATURE TO COME

Secretary

By _____
AUTHORIZED SIGNATURE

SECURITY INSTRUCTIONS ON REVERSE

1234567

MAIA BIOTECHNOLOGY

PO BOX 505006, Louisville, KY 40233-5006

MR A SAMPLE
DESIGNATION (IF ANY)
ADD 1
ADD 2
ADD 3
ADD 4

CUSIP/IDENTIFIER	XXXXXX XX X
Holder ID	XXXXXXXXXX
Insurance Value	1,000,000.00
Number of Shares	123456
DTC	12345678 12345678901234 5

Certificate Numbers	Num/No.	Denom.	Total
12345678901/12345678901	1	1	1
12345678901/12345678901	2	2	2
12345678901/12345678901	3	3	3
12345678901/12345678901	4	4	4
12345678901/12345678901	5	5	5
12345678901/12345678901	6	6	6
Total Transaction			7

MAIA BIOTECHNOLOGY, INC.

THE COMPANY WILL FURNISH WITHOUT CHARGE TO EACH SHAREHOLDER WHO SO REQUESTS, A SUMMARY OF THE POWERS, DESIGNATIONS, PREFERENCES AND RELATIVE, PARTICIPATING, OPTIONAL OR OTHER SPECIAL RIGHTS OF EACH CLASS OF STOCK OF THE COMPANY AND THE QUALIFICATIONS, LIMITATIONS OR RESTRICTIONS OF SUCH PREFERENCES AND RIGHTS, AND THE VARIATIONS IN RIGHTS, PREFERENCES AND LIMITATIONS DETERMINED FOR EACH SERIES, WHICH ARE FIXED BY THE CERTIFICATE OF INCORPORATION OF THE COMPANY, AS AMENDED, AND THE RESOLUTIONS OF THE BOARD OF DIRECTORS OF THE COMPANY, AND THE AUTHORITY OF THE BOARD OF DIRECTORS TO DETERMINE VARIATIONS FOR FUTURE SERIES. SUCH REQUEST MAY BE MADE TO THE OFFICE OF THE SECRETARY OF THE COMPANY OR TO THE TRANSFER AGENT. THE BOARD OF DIRECTORS MAY REQUIRE THE OWNER OF A LOST OR DESTROYED STOCK CERTIFICATE, OR HIS LEGAL REPRESENTATIVES, TO GIVE THE COMPANY A BOND TO INDEMNIFY IT AND ITS TRANSFER AGENTS AND REGISTRARS AGAINST ANY CLAIM THAT MAY BE MADE AGAINST THEM ON ACCOUNT OF THE ALLEGED LOSS OR DESTRUCTION OF ANY SUCH CERTIFICATE.

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM - as tenants in common	UNIF GIFT MIN ACT	-.....(Cust).....Custodian.....(Minor).....
TEN ENT - as tenants by the entireties		under Uniform Gifts to Minors Act.....(State).....
JT TEN - as joint tenants with right of survivorship and not as tenants in common	UNIF TRF MIN ACT	-.....(Cust).....Custodian (until age.....)
		.....(Minor).....under Uniform Transfers to Minors Act.....(State).....

Additional abbreviations may also be used though not in the above list.

For value received, _____ hereby sell, assign and transfer unto

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

_____

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING POSTAL ZIP CODE, OF ASSIGNEE)

_____

_____

_____ Shares

of the common stock represented by the within Certificate, and do hereby irrevocably constitute and appoint

_____ Attorney

to transfer the said stock on the books of the within-named Company with full power of substitution in the premises.

Dated: _____ 20 _____

Signature: _____

Signature: _____

Notice: The signature to this assignment must correspond with the name as written upon the face of the certificate, in every particular, without alteration or enlargement, or any change whatever.

Signature(s) Guaranteed: Medallion Guarantee Stamp

THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (Banks, Stockbrokers, Savings and Loan Associations and Credit Unions) WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM, PURSUANT TO S.E.C. RULE 17Ad-15.

SECURITY INSTRUCTIONS

THIS IS WATERMARKED PAPER. DO NOT ACCEPT WITHOUT NOTING WATERMARK. HOLD TO LIGHT TO VERIFY WATERMARK.

The IRS requires that the named transfer agent ("we") report the cost basis of certain shares or units acquired after January 1, 2011. If your shares or units are covered by the legislation, and you requested to sell or transfer the shares or units using a specific cost basis calculation method, then we have processed as you requested. If you did not specify a cost basis calculation method, then we have defaulted to the first in, first out (FIFO) method. Please consult your tax advisor if you need additional information about cost basis.

If you do not keep in contact with the issuer or do not have any activity in your account for the time period specified by state law, your property may become subject to state unclaimed property laws and transferred to the appropriate state.

15345207

THIS WARRANT AND ANY SECURITIES TO BE ISSUED UPON THE EXERCISE OF THIS WARRANT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR UNDER THE SECURITIES LAWS OF ANY STATE OR OTHER JURISDICTION AND ARE BEING OFFERED AND SOLD IN RELIANCE ON EXEMPTIONS FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND APPLICABLE STATE LAWS. THE WARRANT AND SUCH SECURITIES ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND MAY NOT BE SOLD, OFFERED FOR SALE, TRANSFERRED, ASSIGNED, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, AND THE LAWS OF ANY APPLICABLE STATE OR OTHER JURISDICTION, OR AN EXEMPTION THEREFROM, THE AVAILABILITY OF WHICH MUST BE ESTABLISHED TO THE SATISFACTION OF THE COMPANY.

No. W-**[ ]**
Original Issue Date: _____ 2021

Number of Warrant Shares: _____
(*subject to a subsequent financing*)

MAIA BIOTECHNOLOGY, INC.

WARRANT TO PURCHASE SHARES OF COMMON STOCK

This certifies that, for value received, _____, or its registered assigns (the "Holder"), is entitled, subject to the terms set forth below, to purchase from MAIA Biotechnology, Inc., a Delaware corporation (the "Company"), that number of shares (the "Warrant Shares") of common stock, $0.0001 par value of the Company (the "Common Stock" or "Common Shares"), as determined by multiplying the number of Equity Financing Shares (as defined below) or Common Shares, as applicable, issuable upon conversion of the Note (as defined below) by fifty percent (50%), subject to adjustment as set forth herein, at an exercise price (the "Exercise Price") per Warrant Share equal to the Conversion Price (as defined below) as of the original issuance date of the Equity Financing Shares or Common Shares, as applicable, subject to adjustment as set forth herein. The term "Warrant" as used herein shall include this Warrant, and any warrants delivered in substitution or exchange therefor as provided herein.

For purposes hereof, "Change of Control" means (i) a transaction or series of related transactions in which any "person" or "group" (within the meaning of Section 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")), becomes the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of more than 50% of the outstanding voting securities of the Company having the right to vote for the election of members of the Company's board of directors (excluding a transaction for capital raising purposes), (ii) any reorganization, merger or consolidation of the Company, other than a transaction or series of related transactions in which the holders of the voting securities of the Company outstanding immediately prior to such transaction or series of related transactions retain, immediately after such transaction or series of related transactions, at least a majority of the total voting power represented by the outstanding voting securities of the Company or such other surviving or resulting entity or (iii) a sale, exclusive license (other than in the ordinary course of business, consistent with past practices), lease or other disposition of all or substantially all of the assets of the Company.

For purpose hereof, "Conversion Price" has the meaning set forth in the Note.

For purpose hereof, "Equity Financing Shares" has the meaning set forth in the Note.

For purpose hereof, an "IPO" has the meaning set forth in the Note.

For purpose hereof, a "Note" means the convertible promissory note issued to the Holder by the Company in conjunction with the issuance of this Warrant.

1. Term of Warrant. Subject to the terms and conditions set forth herein, this Warrant shall only be exercisable, in whole or in part, during the period (the "Exercise Period") beginning on the date hereof and ending on earliest to occur of: (a) _____, 2028; or (b) immediately prior to the closing of a Change of Control.

2. Exercise of Warrant.

a. Subject to the terms and conditions set forth herein, the purchase rights represented by this Warrant are exercisable by the Holder in whole or in part, at any time, or from time to time, during the Exercise Period, by the surrender of this Warrant and a notice of exercise, in the form attached hereto as Annex A, duly completed and executed by or on behalf of the Holder, at the principal executive office of the Company (or such other office or agency of the Company as it may designate by notice in writing to the Holder), and upon payment of the Exercise Price for each of the Warrant Shares to be issued pursuant to such exercise in cash.

b. This Warrant shall be deemed to have been exercised immediately prior to the close of business on the date of its surrender for exercise as provided above, and the person entitled to receive the Warrant Shares issuable upon such exercise shall be treated for all purposes as the holder of record of such Warrant Shares as of the close of business on such date. As promptly as practicable on or after such date and in any event within twenty (20) days thereafter, the Company at its expense shall issue and deliver to the person or persons entitled to receive the same a certificate or certificates for the number of Warrant Shares issuable upon such exercise. In the event that this Warrant is exercised in part, the Company at its expense will execute and deliver a new Warrant of like tenor exercisable for the number of Warrant Shares for which this Warrant may then be exercised.

3. No Fractional Shares or Scrip. No fractional Warrant Shares or scrip representing fractional Warrant Shares shall be issued upon the exercise of this Warrant. In lieu of any fractional Warrant Shares to which the Holder would otherwise be entitled, the Company shall, in its sole discretion, elect either to (i) pay the Holder the cash value of such fractional Warrant Share, calculated on the basis of the Exercise Price, or (ii) round to the nearest whole number of Warrant Shares.

4. Replacement of Warrant. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant, the Company at its expense shall execute and deliver, in lieu of this Warrant, a new warrant of like tenor and amount.

5. Rights as Stockholders. The Holder, as a holder of this Warrant, shall not be deemed the holder of Warrant Shares for any purpose, nor shall anything contained herein be construed to confer upon the Holder, as such, any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to give or withhold consent to any corporate action or to receive notice of meetings, or to receive dividends or subscription rights or otherwise until this Warrant shall have been exercised as provided herein.

6. Transfer of Warrant.

a. Warrant Register. The Company will maintain a register (the "Warrant Register") containing the names and addresses of the Holder or Holders. Any Holder of this Warrant or any portion thereof may change its address as shown on the Warrant Register by written notice to the Company requesting such change. Any notice or written communication required or permitted to be given to the Holder may be delivered or given by mail to such Holder as shown on the Warrant Register and at the address shown on the Warrant Register. Until this Warrant is transferred on the Warrant Register of

the Company, the Company may treat the Holder as shown on the Warrant Register as the absolute owner of this Warrant for all purposes, notwithstanding any notice to the contrary.

b. Non-Transferability and Non-Negotiability of Warrant. This Warrant may not be transferred or assigned in whole or in part by the Holder to any Person without the prior written consent of the Company. Notwithstanding the foregoing or anything to the contrary herein, the immediately preceding sentence shall not apply upon a transfer by the Holder to an Affiliate (as defined below) of the Holder, provided that the Holder shall deliver prior written notice to the Company of such transfer and this Warrant shall at all times remain subject to the terms and restrictions set forth in this Warrant and such transferee shall, as a condition to such transfer, deliver a counterpart signature page to this Warrant as confirmation that such transferee shall be bound by all the terms and conditions of this Warrant. Subject to such compliance, title to this Warrant may be transferred by endorsement by the Holder executing the assignment form attached hereto as Annex B (the "Assignment Form") and delivery in the same manner as a negotiable instrument transferable by endorsement and delivery. For purposes hereof, "Affiliate" means, with respect to any individual, corporation, partnership, association, trust, or any other entity (in each case, a "Person"), any Person which, directly or indirectly, controls, is controlled by or is under common control with such Person, or is a shareholder, member, limited partner, general partner, officer, director or manager of such Person; provided, that such Person is not a competitor of the Company or any of its subsidiaries.

c. Exchange of Warrant Upon a Transfer. Upon surrender of this Warrant for exchange, properly endorsed on the Assignment Form and subject to compliance with the other provisions of this Section 6, the Company at its expense shall issue to or on the order of the transferee a new warrant or warrants of like tenor, in the name of the transferee or as the transferee may direct, for the number of Warrant Shares then issuable upon exercise hereof.

7. Reservation of Shares. The Company covenants that, during the term this Warrant is exercisable, the Company will reserve from its authorized and unissued shares of Common Stock a sufficient number of shares of Common Stock to provide for the issuance of all Warrant Shares issuable upon the exercise of this Warrant and, from time to time, will take all steps necessary to provide sufficient reserves of shares of Common Stock issuable upon exercise of this Warrant. The Company further covenants that all Warrant Shares that may be issued upon the exercise of rights represented by this Warrant and payment of the Exercise Price pursuant to Section 2.a, all as set forth herein, will be fully paid, nonassessable, free of preemptive rights (other than preemptive rights which have been waived) and free from all taxes, liens and charges in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously or otherwise specified herein). The Company agrees that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the necessary certificates for Warrant Shares upon the exercise of this Warrant.

8. Adjustment of Exercise Price and Number of Shares. Once fixed, the Exercise Price and the number of Warrant Shares purchasable upon the exercise of this Warrant shall be subject to adjustment from time to time upon the occurrence of certain events described in this Section 8. Upon each adjustment to the Exercise Price, the Holder shall thereafter be entitled to purchase, at the Exercise Price resulting from such adjustment, the number of Warrant Shares obtained by multiplying the Exercise Price in effect immediately prior to such adjustment by the number of Warrant Shares purchasable pursuant hereto immediately prior to such adjustment, and dividing the product thereof by the Exercise Price resulting from such adjustment.

a. In case the Company shall at any time subdivide its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision shall be proportionately reduced, and conversely, in case the outstanding shares of Common

Stock of the Company shall be combined into a smaller number of shares, the Exercise Price in effect immediately prior to such combination shall be proportionately increased.

b. If at any time or from time to time the holders of Common Stock shall have received or become entitled to receive, without further payment therefor:

(i) shares of Common Stock or any shares of capital stock or other securities which are at any time directly or indirectly convertible into or exchangeable for Common Stock, or any rights or options to subscribe for, purchase or otherwise acquire any of the foregoing by way of dividend or other distribution; or

(ii) shares of Common Stock or additional stock or other securities or other property (including cash) by way of spinoff, split-up, merger, reclassification, recapitalization, combination of shares or similar corporate rearrangement (other than shares of Common Stock issued as a stock split or adjustments in respect of which shall be covered by the terms of Section 8.a);

then and in each such case, the Holder hereof shall, upon the exercise of this Warrant, be entitled to receive, in addition to the number of shares of Common Stock receivable thereupon, and without payment of any additional consideration therefor, the amount of shares, capital stock, securities and other property (including cash in the cases referred to in clauses (ii) above) which such Holder would hold on the date of such exercise had Holder been the holder of record of such Common Stock as of the date on which holders of Common Stock received or became entitled to receive such shares, capital stock, securities and other property.

c. If any change in the outstanding Common Stock of the Company or any other event occurs as to which the other provisions of this Section 8 are not strictly applicable or if strictly applicable would not fairly protect the purchase rights of the Holder in accordance with such provisions, then the Board of Directors of the Company shall make an adjustment in the number and class of shares issuable under the Warrant, the Exercise Price or the application of such provisions, so as to protect such purchase rights as aforesaid. The adjustment shall be such as will give the Holder upon exercise for the same aggregate Exercise Price the total number, class and kind of shares, capital stock, securities and other property as he would have owned had the Warrant been exercised for Warrant Shares prior to the event and had he continued to hold such Warrant Shares until after the event requiring adjustment.

9. Notices. In case:

a. the Company shall take a record of the holders of its shares of Common Stock for the purpose of entitling them to receive any dividend or other distribution, or any right to subscribe for or purchase any shares of any class or any other securities, or to receive any other right;

b. of any capital reorganization of the Company, any reclassification of the capital stock of the Company, any consolidation or merger of the Company with or into another entity, or any conveyance of all or substantially all of the assets of the Company to another entity;

c. of any Change of Control; or

d. of any IPO;

then, and in each such case, the Company will mail and email or cause to be mailed and emailed to the Holder or Holders a notice specifying, as the case may be, (i) the date on which a record is to be taken for the purpose of such dividend, distribution or right, and stating the amount and character of such dividend, distribution or right, or (ii) the date on which such reorganization, reclassification, consolidation, merger, conveyance or

Change of Control is to take place, and the time, if any is to be fixed, as of which the holders of record of shares of Common Stock shall be entitled to exchange their shares of Common Stock for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, conveyance, dissolution or Change of Control. Such notice shall be mailed at least ten (10) days prior to the date therein specified. The email addresses are provided on the signature page.

10. Amendments.

a. This Warrant and any term hereof, may be changed, waived, discharged or terminated only by an instrument signed by the Company and the Holder.

b. No waivers of, or exceptions to, any term, condition or provisions of this Warrant, 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.

11. Shareholders Agreement. Notwithstanding anything to the contrary herein, it shall be a condition to the receipt of any Warrant Shares hereunder that the Holder executes a shareholders' agreement by and among the Company and the other parties named therein, or similar agreements, each as amended from time to time, as required by the Company.

12. Lock-up Agreement. The Holder agrees, in connection with an IPO (a) not to offer, pledge, sell, contract to sell, grant any option or contract to purchase, purchase any option or contract to sell, hedge the beneficial ownership of or otherwise dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into, exercisable for or exchangeable for shares of Common Stock (whether such shares or any such securities are then owned by the Holder or are thereafter acquired), or 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, without the prior written consent of the Company or the managing placement agent or underwriter, as applicable, managing such IPO for the duration of any customary lock-up period, and (b) to execute any agreement reflecting clause (a) above as may be requested by the Company or the managing placement agent or underwriter, as applicable, at the time of such IPO.

13. Miscellaneous.

a. This Warrant shall be governed by and construed in accordance with the laws of the State of Delaware, without reference to the conflict of law principles thereof.

b. This Warrant shall bind the Company, its successors and assigns, and shall benefit and bind the Holder, the Holder's successors and permitted assigns.

c. The Section headings in this Warrant have been included solely for ease of reference and shall not be considered in the interpretation or construction of this Warrant. All references in this Warrant to "Sections" shall be construed as references to numbered Sections of this Warrant.

d. All notices or other communications given or made hereunder shall be in writing and shall be delivered or mailed by registered or first class mail, postage prepaid or express overnight courier service, to the address set forth on the signature page hereof. Additionally, all notices or other communications given or made hereunder shall be in writing and shall be emailed to the email addresses provided on the signature page.

[*Remainder of Page Intentionally Left Blank*]

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed and issued by its duly authorized representative on the date first above written.

COMPANY:

MAIA Biotechnology, Inc.

By: _____

Name: Vlad Vitoc

Title: Founder and CEO

Address: 444 West Lake Street
Suite 1700
Chicago, IL 60606

HOLDER'S COUNTERPART SIGNATURE PAGE TO WARRANT

The undersigned Holder agrees to be bound by the terms of the Warrant of MAIA Biotechnology, Inc., a Delaware corporation, executed by the Company in favor of the undersigned Holder, and agrees to all of the terms thereof.

ENTITY:

By (signature): _____

Name: _____

Title: _____

Email: _____

Address: _____

_____

_____

ANNEX A

NOTICE OF EXERCISE

To: MAIA Biotechnology, Inc.

The undersigned hereby (A) elects to purchase _____ shares of Common Stock of MAIA Biotechnology, Inc. ("Warrant Shares") pursuant to the provisions of Section 2 of the attached Warrant, and tenders herewith payment of the purchase price for such shares in full.

(1) In exercising this Warrant, the undersigned hereby confirms and acknowledges that the Warrant Shares to be issued upon exercise hereof are being acquired solely for the account of the undersigned and not as a nominee for any other party, and for investment, and that the undersigned will not offer, sell or otherwise dispose of any such Warrant Shares except under circumstances that will not result in a violation of applicable federal and state securities laws.

(2) Please issue a certificate or certificates representing said Warrant Shares in the name of the undersigned or in such other name as is specified below:

_____
(Name)

(3) Please issue a new Warrant for the unexercised portion of the attached Warrant in the name of the undersigned or in such other name as is specified below:

_____
(Name)

_____ _____
(Date) (Signature)

ANNEX B

ASSIGNMENT FORM

FOR VALUE RECEIVED, the undersigned registered owner of this Warrant hereby sells, assigns and transfers unto the assignee named below all of the rights of the undersigned under the within Warrant, with respect to the number of Warrant Shares set forth below:

Name of Assignee	**Address**	**No. of Warrant Shares**

The assignee acknowledges that this Warrant and the Warrant Shares to be issued upon exercise hereof are being acquired for investment and that the assignee will not offer, sell or otherwise dispose of this Warrant or any Warrant Shares to be issued upon exercise hereof except under circumstances which will not result in a violation of applicable federal and state securities laws.

Date:

_____

Signature of Holder

_____

Signature of Assignee

345 Park Avenue
New York, NY 10154-1895

Main 212.407.4000
Fax 212.407.4990
www.loeb.com

Exhibit 5.1

March 25, 2022

MAIA Biotechnology, Inc.
444 West Lake Street, Suite 1700
Chicago, IL 60606

Ladies and Gentlemen:

We have acted as counsel to MAIA Biotechnology, Inc., a Delaware corporation (the "Company"), in connection with the Registration Statement on Form S-1 (File No. 333-[ ]), as may be amended (the "Registration Statement"), filed by the Company with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), relating to the (i) offer, issuance and sale by the Company of the number of shares of common stock, par value $0.0001 per share (the "Common Stock") of the Company (the "Company Shares") specified in the Registration Statement, including the number of shares of Common Stock specified in the Registration Statement issuable upon the exercise of the underwriter's over-allotment option (the "Over-Allotment Shares"), (ii) representative warrants to purchase up to the number of shares of Common Stock equal to five percent (5%) of the number of shares of Common Stock sold pursuant to the Registration Statement, substantially in the form filed as an exhibit to the Registration Statement (the "Representative Warrants"), and (iii) up to the number of shares of Common Stock specified in the Registration Statement issuable upon exercise of the Representative Warrants (the "Warrant Shares"). The Company Shares, the Over-Allotment Shares, the Representative Warrants and the Warrant Shares shall be referred to herein as the "Securities." We understand that (a) the Company Shares are proposed to be sold for sale to the public and (b) the Representative Warrants are proposed to be issued to the representative of the underwriters (or its permitted assignees), each as described in the Registration Statement and pursuant to an underwriting agreement, substantially in the form filed as an exhibit to the Registration Statement, to be entered into by the Company and the representative (the "Underwriting Agreement.")

We have examined originals or copies, certified or otherwise identified to our satisfaction, of such corporate records of the Company and other certificates and documents of officials of the Company, public officials and others as we have deemed appropriate for purposes of this letter. We have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, and the conformity to authentic original documents of all copies submitted to us as conformed and certified or reproduced copies.

Based upon the foregoing and subject to the assumptions, exceptions, qualifications and limitations set forth hereinafter, we are of the opinion that:

1. The Company Shares and the Over-Allotment Shares have been duly authorized and, when issued, delivered and paid for in accordance with the terms of the Underwriting Agreement, will be validly issued, fully paid and non-assessable.

2. The Representative Warrants have been duly authorized by the Company and, when executed by the Company and delivered to the purchasers thereof against payment therefor in accordance with the terms of the Underwriting Agreement and the representative's warrant agreement, substantially in the form filed as an exhibit to the Underwriting Agreement, will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

3. The Warrant Shares have been duly authorized, and if, as, and when the Warrant Shares are issued and delivered by the Company upon exercise of the Representative Warrants in accordance with the terms thereof, including, without limitation, the payment in full of applicable consideration, the Warrant Shares will be validly issued, fully paid and non-assessable.

The opinion we express above, is based upon a review only of those laws, statutes, rules, ordinances and regulations which, in our experience, a securities lawyer who is a member of the bar of the State of New York and practicing before the Commission exercising customary professional diligence would reasonably recognize as being applicable to the foregoing transactions.

The opinion set forth above, is subject to (i) the effect of any applicable bankruptcy, insolvency, reorganization, moratorium or similar law relating to or affecting creditors' rights generally (including, without limitation, fraudulent conveyance laws) and (ii) the effect of general principles of equity, including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing and the possible unavailability of specific performance or injunctive relief, regardless whether considered in a proceeding in equity or at law.

We express no opinion as to the enforceability of (i) provisions that relate to choice of law, forum selection or submission to jurisdiction (including, without limitation, any express or implied waiver of any objection to venue in any court or of any objection that a court is an inconvenient forum) to the extent that the validity, binding effect or enforceability of any such provision is to be determined by any court other than a state court of the State of New York or (ii) waivers by the Company of any statutory or constitutional rights or remedies. We draw your attention to the fact that, under certain circumstances, the enforceability of terms to the effect that provisions may not be waived or modified except in writing may be limited.

In rendering the foregoing opinions, we have assumed that: (i) the Registration Statement, and any amendments thereto, shall have become effective under the Securities Act and will remain effective at the time of issuance of the Company Shares, the Over-Allotment Shares and the Warrant Shares thereunder; (ii) the Company will issue and deliver the Securities in the manner contemplated by the final prospectus; and (iii) all Securities will be issued in compliance with applicable federal and state securities laws.

The opinions we express herein are limited to matters involving the internal laws of the State of New York and the Delaware General Corporation Law. We express no opinion with respect to any other laws.

We are furnishing this opinion in connection with the filing of the Registration Statement, and this opinion is not to be relied upon for any other purpose without our prior written consent. We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our firm under the heading, "Legal Matters," in the prospectus constituting part of the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Loeb & Loeb LLP

LOEB & LOEB LLP

Exhibit 10.1

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) IS THE TYPE THAT THE REGISTRANT TREATS AS PRIVATE OR CONFIDENTIAL.

SUPPLY AND NON-EXCLUSIVE LICENSE AGREEMENT

This **Supply and Non-Exclusive License Agreement ("Agreement")**, made as of February 1, 2021 (the **"Effective Date"**), is by and between **Regeneron Pharmaceuticals, Inc. ("Regeneron")**, having a place of business at 777 Old Saw Mill River Road, Tarrytown, NY 10591-6707 and MAIA Biotechnology, Inc. operating through its wholly owned subsidiary, THIO Therapeutics, Inc. **("Sponsor")**, having a place of business at 444 West Lake Street, Suite 1700, Chicago, IL 60606. Regeneron and Sponsor are each referred to herein individually as **"Party"** and collectively **"Parties".**

RECITALS

WHEREAS, Sponsor is developing the Sponsor Product;

WHEREAS, Regeneron is developing the Regeneron Product;

WHEREAS, Sponsor desires to sponsor and perform one or more clinical trials for the treatment of patients with various types of cancer, in which the Sponsor Product and the Regeneron Product would be dosed in sequential combination, as more particularly described in the Protocol for such clinical trial; and

WHEREAS, Regeneron desires to supply the Regeneron Product for the performance of each such clinical trial, and Sponsor and Regeneron otherwise desire to cooperate in connection with the performance of each such trial, all on the terms and conditions set forth below.

NOW, THEREFORE, in consideration of the premises and of the following mutual promises, covenants and conditions, the Parties, intending to be legally bound, mutually agree as follows:

1. DEFINITIONS. For all purposes of this Agreement, the capitalized terms defined in this Article 1 and throughout this Agreement shall have the meanings herein specified.

1.1. **"Affiliate"** means, with respect to either Party, a firm, corporation or other entity which directly or indirectly owns or controls said Party, or is owned or controlled by said Party, or is under common ownership or control with said Party. The word **"control"** means (i) the direct or indirect ownership of fifty percent (50%) or more of the outstanding voting securities of a legal entity, or (ii) possession, directly or indirectly, of the power to direct the management or policies

of a legal entity, whether through the ownership of voting securities, contract rights, voting rights, corporate governance or otherwise.

1.2. **"Agreement"** means this agreement, as amended by the Parties from time to time, and as set forth in Section 18 below, together with all appendices attached or deemed attached hereto.

1.3. **"Applicable Law"** means applicable federal, state, local, national and supranational laws, statutes, rules and regulations of a Governmental Authority, including any rules, regulations, guidelines or other requirements of any Regulatory Authority, that may be in effect from time to time during the Term and applicable to a particular activity hereunder, including: export control and economic sanctions regulations which prohibit the shipment of United States origin products and technology to certain restricted countries, entities and individuals; all applicable data protection requirements such as those specified in the EU Data Protection Directive (if applicable) and the regulations issued under the United States Health Insurance Portability and Accountability Act of 1996 ("**HIPAA**"); and laws and regulations governing payments to healthcare providers.

1.4. "**Business Day**" means any day other than a Saturday, Sunday, any public holiday or a day on which commercial banks are authorized or required by law to be closed in the country where the applicable obligations are to be performed.

1.5. "**cGMP**" means the current Good Manufacturing Practices officially published and interpreted by EMA, FDA and other applicable Regulatory Authorities that may be in effect from time to time and are applicable to the Manufacture of the Products.

1.6. "**Clinical Supply Quality Agreement**" means a clinical supply quality agreement entered into by the Parties for a particular Study in accordance with Section 9.11.

1.7. "**CMC**" means, with respect to a Product, the information contained in (or that would be contained in) the chemistry, manufacturing and controls section of an IND or application for Regulatory Approval for such Product in the United States, or the equivalent section of corresponding regulatory filings made outside the United States. For the avoidance of doubt, the information described in the preceding sentence is CMC information regardless of what document it is contained in or the form in which it is disclosed.

1.8. "**Combination**" means the use or method of using the Sponsor Product and the Regeneron Product in concomitant or sequential administration.

1.9. "**Combination Invention**" means any Invention, the practice of which necessarily requires the presence or direct use of both the Sponsor Product or a Telomere Targeting Product, on the one hand, and the Regeneron Product or a PD-1 Antagonist, on the other hand.

1.10. "**Combination Patent Applications**" has the meaning set forth in Section 11.4.

1.11. "**Combination Patents**" has the meaning set forth in Section 11.4.

1.12. "**Confidential Information**" means any confidential and proprietary information or Know-How furnished or otherwise made available to one Party by the other Party pursuant to this Agreement or generated in the performance of this Agreement, except to the extent that it can be established by the receiving Party that such information or Know-How: (a) was already known to the receiving Party, other than under an obligation of confidentiality, at the time of disclosure by the other Party as demonstrated by competent business records; (b) was generally available to the public or otherwise part of the public domain at the time of its disclosure to the receiving Party; (c) became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the receiving Party in breach of this Agreement; (d) was disclosed to the receiving Party by a Third Party who had no obligation to the disclosing Party not to disclose such information to others; or (e) was independently developed by the receiving Party without use of or access or reference to the disclosing Party's Confidential Information, as demonstrated by competent business records.

1.13. "**Control**" and "**Controlled by**" means, with respect to any Patent, data or other intellectual property right, possession by a Party or its Affiliates (whether by ownership, license grant or other means) of the legal right to grant the right to access or use, or to grant a license or a sublicense to, such Patent, data or other intellectual property right as provided for herein without violating the terms of any agreement or other arrangement between such Party (or any of its Affiliates) and any Third Party.

1.14. "**Delivery**" has the meaning set forth in Section 9.3 with respect to delivery of the Regeneron Product, and Section 9.4 with respect to the Sponsor Product.

1.15. "**Effective Date**" has the meaning set forth in the preamble.

1.16. "**EMA**" means the European Medicines Agency and any successor agency(ies) or authority having substantially the same function.

1.17. "**Exclusions List**" has the meaning set forth in the definition of Violation.

1.18. "**FDA**" means the United States Food and Drug Administration and any successor agency(ies) or authority having substantially the same function.

1.19. "**FFDCA**" means the United States Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 301 et seq., as amended from time to time, together with any rules, regulations and requirements promulgated thereunder (including all additions, supplements, extensions, and modifications thereto).

1.20. "**Force Majeure**" has the meaning set forth in Article 17.

1.21. **1.21.** "**Forecast**" has the meaning set forth in Section 9.2.

1.22. "**GCP**" means the Good Clinical Practices officially published by EMA, FDA and the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH) that may be in effect from time to time and are applicable to the testing of the Products.

1.23. "**Government Official**" means: (a) any officer or employee of a government or any department, agency or instrument of a government; (b) any Person acting in an official capacity for or on behalf of a government or any department, agency, or instrument of a government; (c) any officer or employee of a company or business owned in whole or part by a government; (d) any officer or employee of a public international or multilateral organization such as the World Bank, United Nations or the World Health Organization; who, when such Government Official is acting in an official capacity, or in an official decision making role, has responsibility for performing regulatory inspections, government authorizations or licenses, or otherwise has the capacity to make decisions for or on behalf of a government or any department, agency, or instrument of a government with the potential to affect the activities of either of the Parties under this Agreement.

1.24. **"Governmental Authority"** means any court, agency, department, authority or other instrumentality of any national, supra-national, state, county, city or other political subdivision.

1.25. **"HIPAA"** has the meaning set forth in the definition of Applicable Law.

1.26. **"Invention"** means any development, modification, invention, derivative work or improvement, in each case whether or not patentable, including any Know How, and whether or not protectable as Intellectual Property, which is discovered, conceived, reduced to practice or developed or otherwise made by or on behalf of either Party or any of their Representatives in the performance of a Study Plan hereunder or otherwise generated in the performance of this Agreement.

1.27. **"IND"** means an application filed with a Regulatory Authority for authorization to commence clinical trials, including (a) an Investigational New Drug Application as defined in the FFDCA or any successor application or procedure filed with the FDA, (b) any equivalent of a United States IND in other countries or regulatory jurisdictions, (e.g., clinical trial application (CTA)), and (c) all supplements, amendments, variations, extensions and renewals thereof that may be filed with respect to the foregoing.

1.28. **"Intellectual Property"** means any and all of the following rights whether protected, created or arising under Applicable Law in the United States or any other jurisdiction: ideas, inventions, conceptions, Know-How, data, compositions, results, databases, documentation, reports, materials, writings, and other information, including Patents, trade secrets, registered designs, design rights, copyrights (including rights in computer software and database rights), whether registered or not, and all legal means of establishing rights in and to and the aforesaid rights or property similar to any of the foregoing, in any part of the world, together with the rights to apply for the registration of any such right. For the avoidance of doubt, Intellectual Property for purposes of this Agreement expressly excludes all Trademark rights.

1.29. **"IRB/EC"** has the meaning set forth in Section 4.1.

1.30. **"Joint Patent Application"** has the meaning set forth in Section 11.6.

1.31. **"Joint Patents"** has the meaning set forth in Section 11.6.

1.32. **"Jointly Owned Invention"** has the meaning set forth in Section 11.5.

1.33. **"Know-How"** means any proprietary information, innovation, improvement, development, discovery, computer program, device, trade secret, method, know-how, process, technique or the like, including manufacturing, use, process, structural, operational and other data and information, whether or not written or otherwise fixed in any form or medium, regardless of the media on which contained and whether or not patentable or copyrightable, that is not generally known or otherwise in the public domain.

1.34. **"Liability"** has the meaning set forth in Section 15.2.1.

1.35. **"Manufacture," "Manufactured,"** or **"Manufacturing"** means all stages of the manufacture of a Product, including planning, purchasing, manufacture, processing, compounding, storage, filling, packaging, waste disposal, labeling, leafleting, testing, quality assurance, sample retention, stability testing, release, dispatch and supply, as applicable.

1.36. **"Non-Conformance"** means, with respect to any Product, such Product deviates from (a) the applicable specifications for such Product (including, in the case of the Regeneron Product, the Specifications) or (b) any Applicable Law, including cGMP or health, safety or environmental protections.

1.37. **"Party"** has the meaning set forth in the preamble.

1.38. **"Patents"** means patents, patent disclosures and applications (including all patents issuing thereon), statutory invention registrations, divisionals, continuations, continuations-in-part, substitute applications of the foregoing and any extensions, reissues, restorations and reexaminations thereof, and all patent rights provided by international treaties or conventions, whether created or arising under the laws of the United States or any other jurisdiction.

1.39. **"PD-1 Antagonist"** means any molecule that selectively binds to and interferes with or otherwise blocks signaling of the programmed cell death 1 receptor (PD-1) pathway, other than the Regeneron Product.

1.40. **"Person"** means any individual, sole proprietorship, partnership, corporation, business trust, joint stock company, trust, unincorporated organization, association, limited liability company, institution, public benefit corporation, joint venture, entity or governmental entity.

1.41. **"Pharmacovigilance Agreement"** means a pharmacovigilance agreement entered into by the Parties for a particular Study with respect to the exchange of safety information related to the Regeneron Product (alone or in the Combination) as set forth in Section 4.5.

1.42. **"Product"** means the Sponsor Product or the Regeneron Product.

1.43. **"Project Manager"** has the meaning set forth in Section 2.5.

1.44. **"Protocol"** means a written protocol created pursuant to Section 5.1 for a particular Study, that describes such Study and sets forth specific activities to be performed as part of such Study, as such protocol may be amended from time to time by the Parties.

1.45. **"Protocol Synopsis"** means a written summary of the procedural method and design of the applicable Study. A Protocol Synopsis for the initial Study is attached hereto as Appendix A.

1.46. **"Regeneron"** has the meaning set forth in the preamble.

1.47. "**Regeneron Indemnitees**" has the meaning set forth in Section 15.2.1.

1.48. "**Regeneron Invention**" means any Invention, the practice of which necessarily requires the presence or direct use of the Regeneron Product or a PD-1 Antagonist or which requires the practice of any Regeneron Intellectual Property, and which is not a Sponsor Invention or Combination Invention

1.49. **"Regeneron Intellectual Property"** means Intellectual Property Controlled by Regeneron as of the Effective Date or during the Term pertaining to the Regeneron Product or a PD-1 Antagonist, including all such Intellectual Property of Regeneron that is provided to Sponsor under this Agreement or that is reasonably necessary for the conduct of a Study in accordance with this Agreement.

1.50. "**Regeneron Product**" means LIBTAYO® (cemiplimab).

1.51. "**Regulatory Approvals**" means, with respect to a Product and a country, any and all permissions (other than the Manufacturing approvals) required to be obtained from Regulatory Authorities and any other competent authority for the development, registration, importation, use (including use in clinical trials), distribution, sale or marketing of such Product in such country, including any pricing or reimbursement approvals.

1.52. "**Regulatory Authority**" means any applicable supra-national, federal, national, regional, state, provincial, or local governmental or regulatory authority, agency, department, bureau, commission, council or other entity (e.g., the FDA and EMA) regulating or otherwise exercising authority with respect to activities contemplated in this Agreement, including the development and commercialization of Products in the Territory.

1.53. "**Representatives**" means, with respect to a Party, its Affiliates or any employees, directors, contractors, agents or consultants of such Party or its Affiliates.

1.54. "**Restricted Period**" [***]

1.55. [***]

1.56. "**SCC Dispute**" has the meaning set forth in Section 2.4.

1.57. "**Sponsor**" has the meaning set forth in the preamble.

1.58. "**Sponsor Indemnitees**" has the meaning set forth in Section 15.2.2.

1.59. "**Sponsor Intellectual Property**" means Intellectual Property Controlled by Sponsor as of the Effective Date or during the Term pertaining to Sponsor Product or Telomere Targeting Product, including all Intellectual Property of Sponsor that is provided to Regeneron under this Agreement or that is reasonably necessary for the conduct of a Study in accordance with this Agreement.

1.60. **"Sponsor Intellectual Property Agreements"** means any license or other agreement pursuant to which Sponsor Controls any Sponsor Intellectual Property and which is listed in Appendix C hereto.

1.61. **"Sponsor Invention"** means any Invention, the practice of which necessarily requires the presence or direct use of the Sponsor Product or a Telomere Targeting Product, or which requires the practice of any Sponsor Intellectual Property, and which is not a Regeneron Invention or Combination Invention.

1.62. **"Sponsor Product"** means, for a particular Study, the product set forth in the Study Plan for such Study.

1.63. **"Specifications"** means, with respect to Regeneron Product, the set of specifications for such Product as set forth in the applicable Clinical Supply Quality Agreement.

1.64. **"Study"** means each clinical trial to be conducted by Sponsor under this Agreement pursuant to an executed Study Plan involving the concomitant or sequenced administration of the Combination for the treatment of patients in the applicable Study Field, as more particularly described in the applicable Protocol.

1.65. **"Study Completion"** has the meaning set forth in Section 3.9.

1.66. **"Study Coordination Committee"** or **"SCC"** has the meaning set forth in Section 2.1.

1.67. **"Study Data"** means, with respect to a particular Study, all data (including raw data) and results (including Study Results) generated in the performance of the Study Plan for such Study and including results obtained from testing or analysis of biological samples as part of a Study pursuant to the Protocol, if applicable, and any relevant monotherapy data generated in the course of the Study pertaining to the Sponsor Product within the Study Field.

1.68. **"Study Field"** means, with respect to a particular Study, the specific type(s) of cancer identified in the Study Plan.

1.69. **"Study Plan"** means, with respect to a particular Study, the plan, as it may be amended from time to time upon mutual written agreement of the Parties, for the clinical evaluation of the Combination in such Study. The initial Study Plan for the first Study is attached hereto, as Appendix B.

1.70. **"Study Results"** has the meaning set forth in Section 3.9.

1.71. [***]

1.72. "**Term**" has the meaning set forth in Section 7.1.

1.73. "**Territory**" means worldwide.

1.74. "**Third Party**" means any Person other than Sponsor, Regeneron or their respective Affiliates.

1.75. **"Trademark"** means any trademark, trade name, service mark, service name, brand, trade dress, logo, slogan, tag line or other indicia or origin of ownership, whether registered or unregistered, including the goodwill and goods and services associated therewith.

1.76. "**Transfer**" shall mean any sale, license, transfer, other disposal or the granting of any option to do any of the foregoing.

1.77. "**Violation**" means that a Party or any of its officers or directors or any other personnel (or other permitted agents of a Party performing activities hereunder) has been: (1) convicted of any of the felonies identified among the exclusion authorities listed on the U.S. Department of Health and Human Services, Office of Inspector General (OIG) website, including 42 U.S.C. 1320a-7(a) (http://oig.hhs.gov/exclusions/authorities.asp); (2) identified in the OIG List of Excluded Individuals/Entities (LEIE) database (http://exclusions.oig.hhs.gov/) or listed as having an active exclusion in the System for Award Management (http://www.sam.gov); (3) listed by any US Federal agency as being suspended, debarred, excluded or otherwise ineligible to participate in Federal procurement or non-procurement programs, including under 21 U.S.C. 335a (http://www.fda.gov/ora/compliance_ref/debar/) (each of (1), (2) and (3) collectively the "**Exclusions Lists**"); or (4) otherwise ineligible under Applicable Law (including United States law or any foreign equivalent) or any government programs for the performance of the Study or any other activities under this Agreement.

2. STUDY COORDINATION.

2.1. **Formation.** As soon as practical after the Effective Date (but in all cases within thirty (30) days thereafter), the Parties shall form a study coordination committee (the **"Study Coordination Committee"** or "**SCC**"), made up of an equal number of representatives of Regeneron and Sponsor. SCC members will be agreed by both Parties, such agreement not to be unreasonably withheld or delayed.

2.2. **Meetings.** The SCC shall meet as soon as practicable after the Effective Date (with respect to the initial Study) or the effective date of each Study Plan (for each other Study) and then once each calendar quarter, or at such other frequency as is mutually determined by the Parties, until the Study Results for the applicable Study have been provided to Regeneron.

2.3. **Role.** The SCC shall have the responsibility of coordinating and overseeing the conduct of each Study (and other related activities set forth in the applicable Study Plan, including

regulatory activities) and shall enable the exchange of information between the Parties. In particular, the SCC is empowered to:

(i) serve as a forum for discussing Study activities;

(ii) review and approve the initial Study Plan for each Study and any amendments to the applicable Study Plan; for clarity, Regeneron's approval shall only be required for decisions relating to the Combination or the Regeneron Product;

(iii) review and approve the applicable Protocol for each Study and any amendments thereto; for clarity, Regeneron's approval shall only be required for decisions relating to the Combination or the Regeneron Product;

(iv) serve as a forum for discussing strategies to obtain Regulatory Approvals necessary to conduct the applicable Study and for coordinating all regulatory activities (including communications with Regulatory Authorities) for the applicable Study;

(v) serve as a forum for discussing strategies for any diagnostic product to be included in the applicable Study (including the selection of any Third Party to develop or provide any such diagnostic product for the applicable Study);

(vi) serve as a forum for discussing matters relating to supply and Manufacturing, including Forecasts, specifications, Delivery and Non-Conformances;

(vii) establish and oversee joint sub-teams agreed by the Parties to oversee particular projects or activities within the purview of the SCC; and

(viii) perform such other functions as are set forth herein, or as the Parties may mutually agree in writing.

2.4. **Decision Making.** The SCC will attempt to reach decisions by consensus, with the Sponsor representatives having collectively one vote and the Regeneron representatives having collectively one vote. If consensus is not achieved on any matter within thirty (30) days ("**SCC Dispute**"), the matter will be escalated to the Sponsor CEO and the Regeneron Senior Vice President, Global Clinical Development, provided however that (1) in the event that the matter relates solely to the Regeneron Product (including the dose and dosing regimen for the Regeneron Product) or any diagnostic for the Regeneron Product alone, Regeneron shall have final decision making authority and (2) in the event that the matter relates solely to the Sponsor Product (including the dose and dosing regimen for the Sponsor Product) or any diagnostic for the Sponsor Product alone, Sponsor shall have final decision making authority. If such SCC Dispute is not addressed by clause (1) or (2) of the previous sentence, the dispute shall be resolved as provided for in Article 23.

2.5. **Project Manager.** Each Party shall designate a project manager (the "**Project Manager**") who shall be responsible for implementing and coordinating activities, and facilitating the exchange of information between the Parties, with respect to a given Study. The Project Managers shall endeavor to ensure clear and responsive communication between the Parties and the effective exchange of information and shall serve as the primary point of contact for any issues

arising under this Agreement. The Project Managers shall have the right to attend all SCC meetings and may bring to the attention of the SCC any matters or issues either of them reasonably believes should be discussed and shall have such other responsibilities as the Parties may mutually agree in writing. Prior to any meeting of the SCC, the Sponsor Project Manager shall provide an update in writing to the Regeneron Project Manager, which update shall contain information about overall Study progress, recruitment status, interim analysis (if results are available), final analysis and other information relevant to the conduct of the applicable Study and the applicable Study Data.

3. CONDUCT OF THE STUDY.

3.1. **General; Study Plans.** The Parties shall perform the initial Study in accordance with this Agreement, including the Study Plan for such Study, which is attached hereto. For each other Study that the Parties agree to perform under this Agreement, the Parties are to complete and execute a Study Plan, which, among other items, shall include the Protocol Synopsis or the Protocol for such Study and the obligations and activities to be performed by each Party in connection with such Study (including regulatory activities). Each Study Plan, once mutually agreed, shall be signed by an authorized representative of each Party and, once fully executed, shall be deemed incorporated into this Agreement by this reference. Sponsor shall act as the sponsor of each Study and shall hold each IND relating to each Study. Sponsor shall be solely responsible for designing each Study and for the Protocol therefor, provided that the SCC shall review and approve the Protocol pursuant to Section 2.3 and subject to each Party's decision-making rights as set forth in Section 5.2.

3.2. **Compliance.** Subject to Section 5.2, Sponsor shall be responsible for operational execution and management of, and will use commercially reasonable efforts to conduct, each Study. Sponsor shall ensure with respect to itself and its Affiliates that each Study is performed in accordance with: this Agreement, the Protocol for such Study, and all Applicable Laws, including GCP. Sponsor shall ensure that it has a valid and enforceable agreement with each of its subcontractors performing activities under this Agreement that obligates such subcontractor to perform each Study in accordance with this Agreement, the Protocol for such Study, and all Applicable Laws, including GCP.

3.3. **No Violation.** Neither Party shall knowingly employ or subcontract with any Person that is in Violation. Each Party shall notify the other Party in writing immediately if any such Violation comes to its attention with respect to any Person performing activities under this Agreement, and shall, with respect to any such Person in Violation, promptly remove such Person from performing activities or acting in any function or capacity related to any Study or otherwise related to activities under this Agreement.

3.4. **Records and Reports.** Each Party shall maintain reports and all related documentation in good scientific manner and in compliance with Applicable Law in connection with each Study. Sponsor shall provide to Regeneron all Study information and documentation reasonably requested by Regeneron to enable Regeneron to (i) comply with any of its legal, regulatory and/or contractual obligations, or any request by any Regulatory Authority, related to the Regeneron Product or (ii) determine whether the applicable Study has been performed in accordance with this Agreement.

3.5. **Consent.** Sponsor shall ensure that all patient authorizations and consents required under HIPAA, the General Data Protection Regulation (Regulation (EU) 2016/679) (if applicable) or any other similar Applicable Law in connection with each Study are obtained, are valid and permit the sharing of Study Data with Regeneron.

3.6. **Study Data Ownership and Copies.** [***]

3.7. **Restrictions on Use.** [***]

3.8. **Samples.** [***]

3.9. **Report.** "**Study Completion**" for each Study shall occur upon final database lock of such Study with respect to the Study Field. Within four (4) months following Study Completion of a given Study in the Study Field, Sponsor shall provide Regeneron with a preliminary draft of the final clinical study report and the tables and listings for such Study ("**Study Results**"), in electronic form. If Regeneron undertakes to submit comments to the draft clinical study report they shall be provided within thirty (30) days following Regeneron's receipt of the draft clinical study report. Sponsor shall consider in good faith any comments made by Regeneron to such report, and shall not include any statements pertaining to the Regeneron Product (or its use in the Combination) that have not been approved by Regeneron, provided that any objection by Regeneron shall be made in good faith. If Regeneron does not provide comments with respect to any such matter within the applicable period identified above, Regeneron's approval shall be deemed to have been provided. Sponsor shall provide Regeneron with the final version of the clinical study report within a reasonable time following Sponsor's receipt of Regeneron's comments, but in no event later than the date that is three (3) months after such receipt (or, if Regeneron does not provide comments, after the expiration of the thirty (30) day period following Regeneron's receipt of the draft clinical study report). If Regeneron does not provide comments with respect to any such matter within the applicable period identified above, Regeneron's approval shall be deemed to have been provided.

3.10. **License Grants.**

3.10.1. Subject to the terms of this Agreement, with respect to each Study, Regeneron hereby grants to Sponsor a non-exclusive, worldwide, non-transferable, royalty-free, limited license under Regeneron Intellectual Property for the Term of this Agreement, solely to the extent necessary to discharge Sponsor's obligations under this Agreement with respect to the conduct of its activities under the Study Plan for such Study.

3.10.2. Subject to the terms of this Agreement, with respect to each applicable Study, Sponsor hereby grants and agrees that it will grant to Regeneron a non-exclusive, worldwide, non-transferable, royalty-free, limited license under Sponsor Intellectual Property for the Term of this Agreement, solely to the extent necessary to discharge Regeneron's obligations under this Agreement with respect to the conduct of its activities, if any, under the Study Plan for each such applicable Study.

3.11. **Subcontractors; Study Sites, Investigators, and Agreement.** Each Party may delegate its activities under a given Study Plan to its own Affiliates without the other Party's consent. Each Party shall have the right to subcontract any portion of its obligations hereunder to

Third Party subcontractors without the other Party's consent. Each Party shall remain solely and fully liable for the performance of its Affiliates and subcontractors. Subject to the applicable Clinical Supply Quality Agreement, either Party may, without consulting the other Party, subcontract Manufacturing with regards to either the Sponsor Product or the Regeneron Product, as applicable, to be provided for such Study. Each Party shall ensure that each of its Affiliates and subcontractors performs its obligations pursuant to the terms of this Agreement, including the Appendices attached hereto. Each Party shall obtain and maintain copies of documents relating to the obligations performed by such Affiliates and use commercially reasonable efforts to obtain and have maintained documents relating to the obligations performed by such subcontractors and that are required to be provided to the other Party under this Agreement. The clinical trial agreements with such Affiliates and subcontractors shall require the Study sites to comply with all Applicable Laws and will contain confidentiality provisions no less stringent than those contained in this Agreement and intellectual property provisions that are sufficient to enable the assignment, as set forth in this Agreement (a) to Regeneron of all right, title and interest in and to all Regeneron Inventions, (b) to Sponsor of all right title and interest in and to all Sponsor Inventions and (c) to both Parties for an equal and undivided share in all right title and interest in and to all Combination Inventions. Sponsor shall ensure that each clinical research organization performing services for a Study acknowledges in writing to Regeneron that Regeneron is a third party beneficiary of the clinical research organization's indemnification obligations under its agreement(s) with Sponsor. Sponsor shall ensure that all clinical trial agreements with Study sites do not conflict with the terms of this Agreement. Any exceptions to the requirements of this Section 3.11 shall be made on a case-by-case basis and shall be subject to Regeneron's prior written consent which may be withheld in Regeneron's sole discretion.

4. REGULATORY AND SAFETY.

4.1. **Approvals.** Sponsor shall ensure that all directions from any Regulatory Authority or institutional review board or ethics committee ("**IRB/EC**") with jurisdiction over a Study are followed. Further, Sponsor shall ensure that all IRB/EC approvals, customs clearances, and Regulatory Approvals for each Study from any Regulatory Authority and/or IRB/EC with jurisdiction over such Study are obtained prior to initiating performance of such Study. Sponsor will be responsible for filing the IND for each Study.

4.2. **Interactions with Regulatory Authorities.** Regeneron shall have the right (but no obligation) to participate in any discussions between Sponsor and any Regulatory Authority regarding matters related specifically to the Regeneron Product in the Study, and, to the extent reasonably practicable, Sponsor shall provide sufficient advance notice (at least five (5) Business Days, unless a shorter response period is required by the applicable Regulatory Authority, in which case such notice shall be provided to Regeneron as soon as reasonably practicable) to Regeneron of any such discussions. If Sponsor receives any correspondence, comments or other inquiries from a Regulatory Authority that pertain to the Combination or the Regeneron Product, Sponsor shall promptly provide such correspondence, comments or inquiries to Regeneron at least five (5) Business Days before any response is due, unless a shorter response period is required by the applicable Regulatory Authority, in which case such correspondence, comments or inquiries shall be provided to Regeneron as soon as reasonably practicable. For all correspondence, comments or inquiries from a Regulatory Authority that pertain to the Combination, but not solely to the Regeneron Product, Regeneron may provide, and Sponsor will consider in good faith, Regeneron's

reasonable comments provided within such five (5) Business Day (or if applicable, shorter) period. If such correspondence, comments or other inquiries pertain solely to the Regeneron Product, Regeneron will promptly review and respond within five (5) Business Days (or such shorter period as may be required), and Sponsor will forward such response to the Regulatory Authority on Regeneron's behalf. With respect to any correspondence, comments or other inquiries from a Regulatory Authority regarding a Study that pertain specifically to the Regeneron Product, Regeneron shall also be permitted to respond directly to such Regulatory Authority if Regeneron's response includes proprietary subject matter regarding Regeneron's Product that is not to be shared with the Sponsor. Subject to the conditions set forth in the foregoing sentence, if Regeneron elects to respond directly to such Regulatory Authority, Regeneron shall be responsible for providing its response within the deadline prescribed by such Regulatory Authority (if none, Regeneron shall nonetheless provide such response promptly).

4.3. **Right of Reference.** [***]

4.4. **Physician Payment Reporting.** To the extent that Regeneron is required by Applicable Law to report payments made by Sponsor and its subcontractors to physicians or teaching hospitals, Sponsor shall provide on a timely basis, in consultation with Regeneron, all information necessary to comply with Applicable Law.

4.5. **Adverse Event Reporting.** Sponsor will be solely responsible for compliance with all Applicable Law pertaining to safety reporting for each Study and related activities. As soon as reasonably practical after the Effective Date, but, in any event, prior to the first dosing of the first patient with the Regeneron Product in the first Study, the Parties will agree upon and execute a Pharmacovigilance Agreement. For all other Studies, the Parties will execute a Pharmacovigilance Agreement as soon as reasonably practicable following the execution of the Study Plan for such Study, but, in any event, prior to the first dosing of the first patient with a Product in the applicable Study. Each Pharmacovigilance Agreement will establish appropriate processes and timelines for exchanging relevant safety data to fulfill local and international regulatory reporting obligations and to facilitate appropriate safety monitoring of the Regeneron Product (alone or in the Combination) in the applicable Study, and shall include safety data exchange procedures governing the coordination, collection, reporting, and exchange of information concerning any adverse experiences, pregnancy reports, and any other safety information arising from or related to the use of the Regeneron Product (alone or in the Combination) in the applicable Study. Such procedures shall be in accordance with, and enable the Parties and their Affiliates to fulfill, all local and international regulatory reporting obligations to Regulatory Authorities and the clinical investigators.

5. PROTOCOL AND RELATED DOCUMENTS.

5.1. **Protocol.** A Protocol Synopsis for the initial Study has been agreed to by the Parties as of the Effective Date and is attached hereto as Appendix A. Within sixty (60) days after the Effective Date, but, in any event, no later than sixty (60) days prior to any meeting with an ethics committee or Regulatory Authority, as applicable, to discuss the Protocol for the initial Study, the Parties shall agree upon a Protocol for such Study, with reference to the Protocol Synopsis attached hereto as Appendix A, subject to each Party's decision-making rights as set forth in Section 5.2. For each other Study, the Sponsor shall prepare and provide to Regeneron a Protocol and, if

mutually agreed to by the Parties pursuant to Section 2.3, such Protocol shall be included in the applicable Study Plan executed by the Parties. Any changes to the Protocol (whether or not material) shall require mutual written consent subject to each Party's decision-making rights as set forth in Section 5.2.

5.2. **Decision Making.** Notwithstanding anything to the contrary in this Agreement, each Party, in its sole discretion, will determine the dose and dosing regimen for such Party's Product and its use in the Combination and will have the final decision on all matters relating to such Party's Product and its use in the Combination (including any changes to the Protocol that would require such Party to provide additional Product) and any information regarding such Party's Product included in the Protocol. In addition, each Party will determine matters relating to any diagnostic to be used solely for its Product.

5.3. **Consent Form.** Sponsor shall prepare the patient informed consent form for each Study (it being understood that the portion of the informed consent form relating to the Regeneron Product will be provided by Regeneron). Sponsor shall ensure that any such patient informed consent form complies with GCP requirements and Applicable Laws.

5.4. **Financial Disclosure Information.** Sponsor shall (a) track and collect financial disclosure information from all "clinical investigators" involved in each Study and (b) prepare and submit the certification and/or disclosure of the same in accordance with all Applicable Law, including, but not limited to, Part 54 of Title 21 of the United States Code of Federal Regulations (Financial Disclosure by Clinical Investigators) and related FDA Guidance Documents. Sponsor shall track and collect from all "clinical investigators" involved in each Study one (1) "combined" certification and/or disclosure form for both Regeneron and Sponsor. For purposes of this Section 5.4, the term "clinical investigators" shall have the meaning set forth in Part 54.2(d) of Title 21 of the United States Code of Federal Regulations.

6. CERTAIN COVENANTS.

6.1. **Clinical Trials.** [***]

6.2. **Notifications of Potential Transfers in the Study Field**. [***]

6.3. **Other studies.** Except as set forth in this Article 6, nothing in this Agreement shall (a) prohibit either Party from performing studies other than the Studies, including with its Product used individually or in combination with any other compound or product, in any therapeutic area, or (b) create an exclusive relationship between the Parties with respect to any Product.

6.4. **No further obligations.** Nothing in this Agreement obligates either Party to any further agreement or collaboration related to the products or studies in this Agreement.

7. TERM AND TERMINATION.

7.1. **Term.** The term of this Agreement shall commence on the Effective Date and shall continue in full force and effect until completion of all of the obligations of the Parties hereunder for all Studies, or until terminated by either Party pursuant to this Article 7 (the "**Term**"). The

Parties shall be entitled to enter into Study Plans during the period of time commencing on the Effective Date and expiring on the fifth (5th) anniversary of the Effective Date.

7.2. **Unsafe Use of Regeneron Product.** In the event that (a) Regeneron in good faith believes that the Regeneron Product is being used in a manner that represents an unjustified risk to the safety of patients in the Study Field, and Sponsor fails to incorporate changes into the Protocol requested in writing by Regeneron to address such issue, or (b) the Regeneron Product is not being used as described in the Protocol and Sponsor fails to cure such misuse (if capable of cure) within thirty (30) days after receipt of written notice thereof from Regeneron, Regeneron thereafter has the right to immediately terminate this Agreement (or any Study being performed under this Agreement) and the supply of the Regeneron Product upon written notice to Sponsor.

7.3. **Certain Additional Termination Rights.** Either Party may terminate a Study Plan in the event that patient screening for the Study does not commence within twelve (12) months after (a) the Effective Date, with respect to the initial Study, or (b) the execution of the applicable Study Plan, with respect to each other Study. If either Party terminates a Study Plan under this Section 7.3, Sponsor shall reimburse Regeneron for Regeneron Product it received in connection with such Study Plan based on the actual out-of-pocket cost to Regeneron of such Regeneron Product.

7.4. **Termination for Material Breach.** Either Party may terminate this Agreement if the other Party commits a material breach of this Agreement, and such material breach remains uncured thirty (30) days after receipt of written notice thereof from the non-breaching Party; provided that if such material breach cannot reasonably be cured within thirty (30) days, the breaching Party shall be given a reasonable period of time to cure such breach not to exceed one-hundred and twenty (120) days; provided further, that if such material breach is incapable of cure, then the notifying Party may terminate this Agreement effective after the expiration of such thirty (30)- day period. Notwithstanding the foregoing, if any such material breach relates solely to a particular Study and does not reasonably relate to or affect the breaching Party's performance of (or ability to perform) any other Study, then the non-breaching Party shall only have the right under this Section 7.4. to terminate such Study to which the breach relates. If Regeneron terminates for material breach by Sponsor, then Sponsor shall reimburse Regeneron for Regeneron Product it received in connection with the terminated Study to which the breach relates based on the actual out-of-pocket cost to Regeneron of such Regeneron Product.

7.5. **Pharmacovigilance Agreement.** Either Party may terminate a particular Study under this Agreement immediately upon written notice to the other Party if (a) the Parties do not execute a Pharmacovigilance Agreement for such Study within the timeframe set forth in Section 4.5 or (b) the terminating Party determines in good faith that such Study represents an unjustified risk to the safety of patients in the applicable Study Field.

7.6. **Mutual Termination for Regulatory Action; Other Reasons.** Either Party may terminate a particular Study (in whole or in part on a country-by-country basis) immediately upon written notice to the other Party in the event that any Regulatory Authority takes any action, or raises any objection, that prohibits the terminating Party from supplying its Product for purposes of such Study. Additionally, either Party shall have the right to terminate a particular Study immediately upon written notice to the other Party in the event that it determines, in its sole

discretion, to discontinue development of its Product within the Study Field for such Study, for medical, scientific or legal reasons.

7.7. **Mutual Termination for Corruption.** Either Party shall be entitled to terminate this Agreement immediately upon written notice to the other Party, if such other Party fails to perform its obligations in accordance with Section 14.5. The non-terminating Party shall have no claim against the terminating Party for compensation for any loss of whatever nature by virtue of the termination of this Agreement in accordance with this Section 7.7. To the extent (and only to the extent) that the laws of the Territory provide for any such compensation to be paid to the non-terminating Party upon the termination of this Agreement, the non-terminating Party hereby expressly agrees (to the extent possible under the laws of the Territory) to waive or to repay to the Party terminating this Agreement any such compensation.

7.8. **Survival.** The provisions of Sections 3.4 - 3.9, 4, 7.3 - 7.4, 10 - 16 and 20 shall survive the expiration or termination of this Agreement.

7.9. **Effects of Termination.**

7.9.1. *No Prejudice.* Termination of this Agreement shall be without prejudice to any claim or right of action of either Party against the other Party for any prior breach of this Agreement.

7.9.2. *Return of Regeneron Product.* In the event that this Agreement or any Study is terminated, or in the event Sponsor remains in possession (including through any Affiliate or subcontractor) of Regeneron Product at the end of the Term, Sponsor shall, at Regeneron's sole discretion, promptly either return or destroy all such unused Regeneron Product pursuant to Regeneron's instructions subject to Section 7.9.4 below. If Regeneron requests that Sponsor destroy the unused Regeneron Product, as the case may be, Sponsor shall provide written certification of such destruction. In the event Sponsor terminates this Agreement pursuant to Section 7.4, all such return of unused Regeneron Product shall be at Regeneron's sole cost and expense and in all other instances shall be at Sponsor's sole cost and expense.

7.9.3. *Confidential Information.* Upon termination of this Agreement, each Party and its Affiliates shall promptly return to the other Party or destroy any Confidential Information of the other Party (other than Study Data and Inventions in which such Party has an ownership interest) furnished to the receiving Party by the other Party, except that the receiving Party shall have the right to retain one copy for record keeping purposes and such retained copy shall be maintained in accordance with the non-disclosure and non-use restrictions set forth in Article 10.

7.9.4. *Wind-Down.* Upon receipt by either Party of a termination notice of this Agreement, subject to the terms of this Article 7, Sponsor shall submit a wind-down plan to Regeneron setting forth the tasks reasonably necessary or required in connection with the orderly termination of the Study and the proper plan for managing the patients enrolled in the Study, including any actions reasonably required to safely close out the Study or required by Applicable Laws. [***]

8. COSTS OF STUDY PLAN. [***]

9. SUPPLY AND USE OF THE PRODUCTS.

9.1. **Supply.** Sponsor and Regeneron will each use commercially reasonable efforts to supply, or cause to be supplied, sufficient quantities of Sponsor Product and Regeneron Product, respectively, to satisfy the requirements of the Study Plan for each Study. Each Party shall also provide to the other Party a contact person for coordination of Product supply under this Agreement. Each Party shall supply its Product in accordance with the terms of this Agreement. Each Party shall notify the other Party as promptly as possible in the event of any Manufacturing delay that is likely to adversely affect supply of a Product as contemplated by this Agreement, and Sponsor and Regeneron shall cooperate to seek to promptly resolve such issue. Notwithstanding the foregoing, or anything to the contrary herein, in the event that either Party is not supplying its Product in accordance with the terms of this Agreement, or is not allocating its Product under procedures agreed to under Section 9.9, then the other Party shall have no obligation to supply its Product, or may allocate proportionally. This Agreement does not create any obligation on the part of Regeneron to provide the Regeneron Product for any activities other than as set forth in a Study Plan, nor does it create any obligation on the part of Sponsor to provide the Sponsor Product for any activities other than those set forth in a Study Plan. Both Parties acknowledge and agree that any Regeneron Product procured by Sponsor prior to the Effective Date, or during the Term but not provided to Sponsor by Regeneron, shall be used in accordance with this Agreement.

9.2. **Forecast.** For each Study, the Study Plan shall include a forecast of quantities and delivery dates for the requirements of the Regeneron Product to be supplied under this Agreement for such Study (each a "**Forecast**"). If there is any change in the quantity of Regeneron Product required for a Study, Sponsor shall promptly notify Regeneron of such change upon becoming aware of the same. Promptly following receipt of any requested change to any Forecast, Regeneron shall notify Sponsor of its ability to supply the requirements of the modified Forecast. The Parties shall discuss the changes to the Forecast and Regeneron's ability to meet any such changes. In the event Regeneron notifies Sponsor that it is able to meet such requirements, then such modified Forecast shall be deemed accepted by Regeneron. If Regeneron notifies Sponsor that it is not able to meet such requirements, then Regeneron, at its option, may prepare and provide Sponsor with a time schedule for additional Manufacturing of the Regeneron Product to satisfy such requirements. Otherwise, the previous Forecast shall apply.

9.3. **Delivery; Storage.** Regeneron will deliver the Regeneron Product DAP (INCOTERMS 2010) to Sponsor's, or its designee's, location as specified by Sponsor and agreed to by Regeneron ("**Delivery**" with respect to such Regeneron Product). Risk of loss for the Regeneron Product shall transfer from Regeneron to Sponsor at Delivery. All costs associated with the subsequent transportation, warehousing and distribution of Regeneron Product, including all importation or customs taxes or duties, shall be borne by Sponsor. Sponsor will: (a) take delivery of the Regeneron Product supplied hereunder; (b) perform the acceptance procedures allocated to it under the Clinical Supply Quality Agreement; (c) subsequently label and pack (in accordance with Section 9.6), and promptly ship the Regeneron Product to the Study sites, in compliance with cGMP, GCP and other Applicable Law and the Clinical Supply Quality Agreement; and (d) provide, at the reasonable request of Regeneron, the following information: any applicable chain of custody forms, in transport temperature recorder(s), records and receipt verification

documentation, such other transport or storage documentation as may be reasonably requested by Regeneron, and usage and inventory reconciliation documentation related to the Regeneron Product.

9.4. **Sponsor Product.** As between the Parties, Sponsor is solely responsible, at its own cost, for supplying (including all Manufacturing, acceptance and release testing) the Sponsor Product for each Study Plan, and the subsequent handling, storage, transportation, warehousing and distribution of the Sponsor Product supplied hereunder and shall use commercially reasonable efforts to perform such activities. Sponsor shall ensure that all such activities are conducted in compliance with cGMP, GCP and other Applicable Law and that the Sponsor Product meets Sponsor's specifications. For purposes of this Agreement, the "**Delivery**" of a given quantity of the Sponsor Product shall be deemed to occur when such quantity is packaged for shipment to a Study site or other site as set forth herein.

9.5. **Representations and Warranties.** [***]

9.6. **Labeling and Packaging.** Regeneron shall provide the Regeneron Product to Sponsor in the form of unlabeled vials, and Sponsor shall be responsible for labeling, packaging and leafleting such Regeneron Product in accordance with the terms and conditions of the applicable Clinical Supply Quality Agreement and otherwise in accordance with all Applicable Law, including applicable cGMP, GCP, and health, safety and environmental protections. Sponsor shall be responsible for labeling, packaging and leafleting of the Sponsor Product in accordance with all Applicable Law, including applicable cGMP, GCP, and health, safety and environmental protections.

9.7. **Use, Handling and Storage.** Sponsor shall (a) use the Regeneron Product solely for purposes of performing the Study for which such Regeneron Product was provided; (b) not use the Regeneron Product in any manner that is inconsistent with this Agreement or for any commercial purpose; and (c) use, store, transport, handle and dispose of the Regeneron Product in compliance with Applicable Law and the applicable Clinical Supply Quality Agreement, as well as all instructions of Regeneron. Sponsor shall not reverse engineer, reverse compile, disassemble or otherwise attempt to derive the composition or underlying information, structure or ideas of the Regeneron Product, and in particular shall not analyze the Regeneron Product by physical, chemical or biochemical means except as necessary to perform its obligations under the applicable Clinical Supply Quality Agreement.

9.8. **Release.** A certificate of analysis shall accompany each shipment of the Regeneron Product to Sponsor. Sponsor shall be responsible for any failure of the Regeneron Product to meet the Specifications to the extent caused by shipping, storage or handling conditions after Delivery to Sponsor hereunder. Sponsor shall, upon receipt of Regeneron Product and within the time defined in the applicable Clinical Supply Quality Agreement, perform the acceptance (including testing, if any) procedures allocated to it under such Clinical Supply Quality Agreement. Sponsor shall be solely responsible for taking all steps necessary to determine that Regeneron Product or Sponsor Product, as applicable, is suitable for release before making such Regeneron Product or Sponsor Product, as applicable, available for human use, consistent with the Clinical Supply Quality Agreement.

9.9. **Shortage; Allocation.** In the event of a shortage of a Product such that a Party reasonably believes that it will not be able to fulfill its supply obligations hereunder with respect to its Product, such Party will provide prompt written notice to the other Party thereof (including the quantity of its Product that such Party reasonably determines it will be able to supply) and, upon request, the Parties will promptly discuss such situation (including how the quantities of Product that such Party is able to supply hereunder will be allocated within the applicable Study). In such event, the Party experiencing such shortage shall use its commercially reasonable efforts to remedy the situation giving rise to such shortage as soon as practicable and to take action to minimize the impact of the shortage on the applicable Study.

9.10. **Records.** Sponsor will keep complete and accurate written records pertaining to its use and disposition of Regeneron Product (including its storage, shipping (cold chain) and chain of custody activities) and, upon the request of Regeneron made with reasonable notice, will make such records open to review by Regeneron for the purpose of conducting investigations for the determination of Regeneron Product safety and/or efficacy and Sponsor's compliance with this Agreement with respect to the Regeneron Product. Such requests for review by Regeneron shall not be made more than once per calendar year unless Regeneron has a reasonable basis for seeking more frequent review. Each Party shall maintain complete and accurate records pertaining to its Manufacture of its Product supplied hereunder, and, upon request of the other Party, will make such records open to review by such other Party for the purpose of confirming such Party's compliance with this Agreement with respect to its Manufacturing obligations hereunder. Such requests for review by the other Party shall not be made more than once per calendar year unless such Party has a reasonable basis for seeking more frequent review.

9.11. **Quality.** The Parties (or their Affiliates) shall enter into a Clinical Supply Quality Agreement for each Study with respect to the quality assurance of the Regeneron Product supplied by Regeneron hereunder for such Study. The Parties will execute the Clinical Supply Quality Agreement for the initial Study as soon as reasonably practicable following the Effective Date, but in any event, prior to the initiation of the shipment of Regeneron Product for a Study. For all other Studies, the Parties will execute the Clinical Supply Quality Agreement as soon as reasonably practicable following the execution of the Study Plan for such Study, but in any event, prior to the initiation of the shipment of Regeneron Product for such Study. Quality matters related to the Manufacture of Regeneron Product for a particular Study shall be governed by the terms of the Clinical Supply Quality Agreement for such Study, in addition to the relevant quality terms of this Agreement, provided that if there is a conflict between the terms of the applicable Clinical Supply Quality Agreement and the terms of this Agreement with respect to a particular Study, the terms of the Clinical Supply Quality Agreement shall govern with respect to any technical or quality matters and otherwise the terms of this Agreement shall govern.

Each Party shall use commercially reasonable efforts to supply its Products for each Study with sufficient shelf-life remaining at time of Delivery for its anticipated use in the relevant Study. Each Party shall implement and perform operating procedures and controls for sampling, stability and other testing of its Product, and for validation, documentation and release of its Product and such other quality assurance and quality control procedures as are required by cGMPs and the applicable Clinical Supply Quality Agreement. Audit and inspection rights, recalls, rejection and non-conformances, in each case, with respect to the Regeneron Product and Sponsor Product, are governed by the terms of the applicable Clinical Supply Quality Agreement.

9.12. **Placebo.** Sponsor shall be responsible for the Manufacture and supply of placebo, comparator products and diagnostic products, in each case, as applicable and to the extent set forth in the applicable Study Plan; provided that, except as otherwise set forth in a Study Plan, Regeneron shall be responsible for the Manufacture and supply of placebo and diagnostic products for the Regeneron Product. The provisions of this Article 9 applicable to the supply of Product shall also apply to any such placebo or comparator product.

9.13. **Supporting Documentation.** After release of Regeneron Product by Regeneron (as described in the applicable Clinical Supply Quality Agreement) and concurrent with shipment of Regeneron Product to Sponsor, Regeneron shall provide Sponsor with such certificates and documentation as are described in the applicable Clinical Supply Quality Agreement, which documentation will support release of such Regeneron Product for human use.

9.14. **Non-Conformance Determination.** In the event that Sponsor becomes aware that the Regeneron Product may have a Non-Conformance, Sponsor shall promptly notify Regeneron by [***] The Parties shall investigate any Non-Conformance and any discrepancy between them shall be escalated to the head of quality of each Party (or such person's designee) for resolution.

9.15. **Replacement.** In the event that any proposed or actual shipment of the Regeneron Product (or portion thereof) shall be agreed to have a Non-Conformance at the time of Delivery to Sponsor, then unless otherwise agreed to by the Parties, Regeneron shall replace such Regeneron Product as is found to have a Non-Conformance (with respect to the Regeneron Product that has not yet been administered in the course of performing the applicable Study). [***]

9.16. **Non-Conformance of Sponsor Product.** Sponsor shall be responsible for, and Regeneron shall have no obligations or liability with respect to, any amounts of Sponsor's Product supplied hereunder that is found to have a Non-Conformance. Sponsor shall replace, using diligent efforts, any of Sponsor's Product as is found to have a Non-Conformance (with respect to Sponsor Product that has not yet been administered in the course of performing the applicable Study). [***]

10. CONFIDENTIALITY.

10.1. **Confidential Information.** Sponsor and Regeneron agree to hold in confidence any Confidential Information provided or made available by the other Party, and neither Party shall use Confidential Information of the other Party except to fulfill such Party's obligations or exercise such Party's rights under this Agreement. Without limiting the foregoing, Regeneron may not use Confidential Information disclosed by or on behalf of Sponsor relating to the Sponsor Product other than for purposes of performance of a Study Plan or in exercising its rights as set forth in this Agreement. Sponsor may not use Confidential Information disclosed by or on behalf of Regeneron relating to the Regeneron Product other than for purposes of the performance of a Study Plan or in exercising its rights as set forth in this Agreement. Neither Party shall, without the prior written permission of the other Party, disclose any Confidential Information of the other Party to any Third Party except to the extent disclosure (a) is required by Applicable Law; (b) is pursuant to the terms of this Agreement; or (c) is reasonably necessary for the conduct of a Study Plan, and (d) provided that the disclosing Party shall otherwise provide reasonable advance notice to the other Party before making such disclosure and obtain prior approval therefor. For the avoidance of doubt, Sponsor may, without Regeneron's consent, disclose Confidential Information to clinical trial sites

and clinical trial investigators performing a Study, the data safety monitoring and advisory board relating to a Study, and Regulatory Authorities such as the FDA, EMA or other health authorities working with Sponsor on a Study, in each case to the extent necessary for the performance of the applicable Study and provided that such persons (other than governmental entities) are bound by an obligation of confidentiality at least as stringent as the obligations contained herein. [***]

10.2. **Ownership of Certain Confidential Information.** Study Data regarding the safety or efficacy of the Regeneron Product alone shall be the Confidential Information of Regeneron and Study Data regarding the safety or efficacy of the Sponsor Product alone shall be the Confidential Information of Sponsor. Study Data regarding the Combination (including the safety of the Combination and/or efficacy in any Study Field) shall be the Confidential Information of both Parties; [***]. The existence of this Agreement and the terms and conditions hereof are deemed to constitute both Parties' Confidential Information provided that each Party may disclose such terms and conditions to actual or potential investors, acquirors, licensees and collaborators on a need-to-know basis under the same confidentiality requirements set forth in this Section 10 that apply to each of the Parties under this Agreement. Inventions that constitute Confidential Information and are jointly owned by the Parties, shall constitute the Confidential Information of both Parties and each Party shall have the right to use such Confidential Information consistent with this Article 10 and Articles 11, 12 and 13. Inventions that constitute Confidential Information and are solely owned by one Party shall constitute the Confidential Information of that Party and each Party shall have the right to use such Confidential Information consistent with this Article 10 and Articles 11, 12 and 13.

10.3. **Personally Identifiable Data.** All Confidential Information containing personal identifiable data shall be handled in accordance with all applicable data protection and privacy laws, rules and regulations applicable to such Party.

11. INTELLECTUAL PROPERTY.

11.1. **Sponsor Inventions.** Sponsor shall own all right, title and interest in and to Sponsor Inventions and all Intellectual Property rights thereto are the exclusive property of Sponsor, [***]

11.2. **Regeneron Inventions.** All right, title and interest in and to Regeneron Inventions and all Intellectual Property rights thereto are the exclusive property of Regeneron, [***]

11.3. **Combination Inventions.** All right, title and interest in and to all Combination Inventions shall belong jointly to Sponsor and Regeneron. [***]

11.4. [***]

11.5. [***]

11.6. [***]

11.7. **Enforcement; Control.** Each Party shall promptly provide the other Party with written notice reasonably detailing any known or alleged infringement or misappropriation by a Third Party of Combination Patents or Joint Patents, as well as any declaratory judgment or similar

action alleging the invalidity, unenforceability or non-infringement of Combination Patents or Joint Patents. [***]

11.8. **Patent Applications.** [***]

12. REPRINTS; RIGHTS OF CROSS-REFERENCE.

Consistent with applicable copyright and other laws, each Party may use, refer to, and disseminate reprints of scientific, medical and other published articles and materials from journals, conferences and/or symposia relating to a Study Plan, which disclose the name of a Party, provided such use does not constitute an endorsement of any commercial product or service by the other Party.

13. PUBLICATIONS.

13.1. **Publicity.** Unless otherwise required by Applicable Law (including regulations under any stock exchange on which either Party or its Affiliates is listed), neither Party shall make any public announcement concerning this Agreement or any Study (including any postings to www.clinicaltrials.gov. under Section 13.2) or otherwise communicate with any news media without the prior written consent of the other Party. Without limiting the previous sentence, to the extent a Party desires to make such public announcement, such Party shall provide the other Party with a draft thereof at least seven (7) Business Days prior to the date on which such Party would like to make the public announcement, unless such ten day prior notice is not possible in order to comply with Applicable Laws (including regulations under any stock exchange on which either Party or its Affiliates is listed); further provided however, that, in such case such Party shall provide the other Party with as much advance notice as reasonably practicable**.**

13.2. **Registration.** Sponsor will register each Study with the Clinical Trials Registry located at www.clinicaltrials.gov as required by Applicable Law.

13.3. **Publications.** Sponsor shall have the first right to publish Study Results subject to Section 13.4 and shall use commercially reasonable efforts to publish or present scientific papers regarding the Study Plan and Study Results in accordance with accepted scientific practice. Regeneron agrees not to publish Study Results for any Study prior to the timely publication of the Study Results from such Study by Sponsor.

13.4. **Review.** The Parties agree that prior to submission of any Study Data for publication or presentation or any other dissemination of any such results, including oral dissemination, the publishing Party shall invite the other to comment on the content of the material to be published or presented according to the following procedure:

(i) At least forty-five (45) days prior to submission for publication of any paper, letter or any other publication, or thirty (30) days prior to submission for presentation of any abstract, poster, talk or any other presentation, the publishing Party shall provide to the other Party the full details of the proposed publication or presentation in an electronic version (cd rom or email attachment). Upon written request from the other Party, the publishing Party agrees not to submit data for publication/presentation for an additional sixty (60) days in order to allow for actions to be taken to preserve rights for patent protection.

(ii) The publishing Party shall give reasonable consideration to any request by the other Party made within the periods mentioned in clause (i) of this Section 13.4 to modify the publication.

(iii) The publishing Party shall remove all Confidential Information of the other Party (but shall not remove jointly owned Study Data) before finalizing the publication.

13.5. **Acknowledgement.** Each Party agrees to identify the other Party and acknowledge its support in any press release and any other publication or presentation of the results of any Study.

14. REPRESENTATIONS AND WARRANTIES; DISCLAIMERS.

14.1. **Mutual Representations and Warranties.** Each of Sponsor and Regeneron represents and warrants to the other that it has the full right and authority to enter into this Agreement.

14.2. **Representations and Warranties of Sponsor.** Sponsor hereby represents and warrants to Regeneron that: (a) Sponsor has the full right, power and authority to grant all of the rights and licenses granted to Regeneron under this Agreement; (b) it will not transfer to any Third Party except to subcontractors acting on behalf of Sponsor pursuant to this Agreement, or sell or make commercially available any Regeneron Product for any use; (c) it will not use Regeneron Product in any manner that is inconsistent with or in conflict with the rights granted herein without the prior written consent of Regeneron in each instance; (d) that all of its Representatives are, or will be prior to generating Study Results or Inventions, contractually obligated to assign all Study Results and Inventions to Sponsor; and (e) that copies of all relevant Sponsor Intellectual Property Agreements have been provided to Regeneron.

14.3. **Representations and Warranties of Regeneron.** Regeneron hereby represents and warrants to Sponsor that Regeneron has the full right, power and authority to grant all of the rights and licenses granted to Sponsor under this Agreement and that all of its Representatives are, or will be prior to generating Study Results or Inventions, contractually obligated to assign Inventions to Regeneron.

14.4. **No Guarantee of Results.** Sponsor does not undertake that any Study shall lead to any particular result, nor is the success of any Study guaranteed. Neither Party accepts any responsibility for any use that the other Party may make of Study Data nor for advice or information given in connection therewith.

14.5. **Anti-Corruption.**

(i) In performing their respective obligations hereunder, the Parties acknowledge that the corporate policies of Sponsor and Regeneron and their respective Affiliates require that each Party's business be conducted within the letter and spirit of the law. By signing this Agreement, each Party agrees to conduct the business contemplated herein in a manner which is consistent in all material respects with all Applicable Law, including the U.S. Foreign Corrupt Practices Act, good business ethics, and such Party's ethics and other corporate policies.

(ii) Each Party represents and warrants that it and its Representatives have not, and covenants that it and its Representatives will not, in connection with the performance of this Agreement, directly or indirectly, make, promise, authorize, ratify or offer to make, or take any action in furtherance of, any payment or transfer of anything of value for the purpose of (a) influencing, inducing or rewarding any act, omission or decision to secure an improper advantage, (b) improperly assisting it in obtaining or retaining business for it or the other Party or (c) public or commercial bribery.

(iii) Neither Party shall contact or otherwise knowingly meet with any Government Official for the purpose of discussing activities arising out of or in connection with this Agreement without the prior written approval of the other Party, except where such meeting is consistent with the purpose and terms of this Agreement and in compliance with Applicable Law.

14.6. **Disclaimer**. EXCEPT AS EXPRESSLY PROVIDED HEREIN, REGENERON MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE REGENERON PRODUCT, AND SPONSOR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SPONSOR PRODUCT.

15. INSURANCE; INDEMNIFICATION; LIMITATION OF LIABILITY.

15.1. **Insurance.** Each Party warrants that it maintains a policy or program of insurance or self-insurance at levels sufficient to support the indemnification obligations assumed herein. Without limiting the foregoing, Sponsor shall procure insurance for the performance of each Study and shall add Regeneron as an additional insured under each such policy with respect to the applicable Study. Upon request, a Party shall provide evidence of such insurance.

15.2. **Indemnification.**

15.2.1. *By Sponsor.* [***]

15.2.2. *By Regeneron.* [***]

15.2.3. *Study Subject Injuries.* [***]

15.2.4. *Notice of Claim.* The obligations of Regeneron and Sponsor under this Section 15.2 are conditioned upon the delivery of written notice to Regeneron or Sponsor, as the case might be, of any potential Liability, as the case may be, within a reasonable time after the indemnified Party becomes aware of such potential Liability. The indemnifying Party will have the right to assume the defense of any suit or claim related to the Liability if it has assumed responsibility for the suit or claim in writing. The indemnified Party may participate in (but not control) the defense thereof at its sole cost and expense. The indemnifying Party shall not agree to any settlement of such action, suit, proceeding or claim without the prior written consent of the indemnified Party, which shall not be unreasonably withheld. It shall be reasonable for the indemnifying Party to withhold consent if the settlement of such action, suit, proceeding or claim or consent to any judgment in respect thereof that does not include a complete and unconditional

release of the indemnified Party from all Liability with respect thereto or if it imposes any Liability or obligation on the indemnified Party without the prior written consent of the indemnified Party.

15.2.5. *Study Subjects.* [***]

15.3. **LIMITATION OF LIABILITY.** OTHER THAN WITH RESPECT TO THE OBLIGATIONS OF EACH PARTY UNDER SECTION 10.1, IN NO EVENT SHALL EITHER PARTY (OR ANY OF ITS AFFILIATES OR SUBCONTRACTORS) BE LIABLE TO THE OTHER PARTY FOR, NOR SHALL ANY PARTY HAVE THE RIGHT TO RECOVER, ANY SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS OR DAMAGES FOR LOST OPPORTUNITIES), WHETHER IN CONTRACT, WARRANTY, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE, ARISING OUT OF (x) THE MANUFACTURE OR USE OF ANY PRODUCT SUPPLIED HEREUNDER OR (y) ANY BREACH OF OR FAILURE TO PERFORM ANY OF THE PROVISIONS OF THIS AGREEMENT OR ANY REPRESENTATION, WARRANTY OR COVENANT CONTAINED IN OR MADE PURSUANT TO THIS AGREEMENT, EXCEPT THAT SUCH LIMITATION SHALL NOT APPLY TO DAMAGES PAID OR PAYABLE TO A THIRD PARTY BY AN INDEMNIFIED PARTY FOR WHICH THE INDEMNIFIED PARTY IS ENTITLED TO INDEMNIFICATION HEREUNDER.

16. USE OF NAME. Except as otherwise provided herein, neither Party shall mention or otherwise use the name, logo, or trademark of the other party or any of its Affiliates (or any abbreviation or adaptation thereof) in any marketing publication, press release, marketing and promotional material, or other form of publicity without the prior written approval of such other Party in each instance, consent of which may be held at the relevant Party's absolute discretion. The restrictions imposed by this Section shall not prohibit either Party from making any disclosure identifying the other Party that is required by applicable law. Subject to Sections 13.1 and 13.4, Sponsor may identify itself as an entity that was provided Regeneron Product for a Study.

17. FORCE MAJEURE. If in the performance of this Agreement, one of the Parties is prevented, hindered or delayed by reason of any cause beyond such Party's reasonable control (*e.g.*, war, riots, fire, strike, governmental laws, floods, earthquakes, hurricanes, acts of God, or pandemic-related lock down in relevant regions), such Party shall be excused from performance to the extent that it is necessarily prevented, hindered or delayed ("Force Majeure"). The non-performing Party will notify the other Party of such Force Majeure within ten (10) days after such occurrence by giving written notice to the other Party stating the nature of the event, its anticipated duration, and any action being taken to avoid or minimize its effect. The suspension of performance will be of no greater scope and no longer duration than is necessary and the non-performing Party will use commercially reasonable efforts to remedy its inability to perform.

18. ENTIRE AGREEMENT; MODIFICATION. The Parties agree to the full and complete performance of the mutual covenants contained in this Agreement. This Agreement, together with each Study Plan, Clinical Supply Quality Agreement and each Pharmacovigilance Agreement, constitutes the sole, full and complete agreement by and between the Parties with respect to the subject matter of this Agreement, and all prior agreements, understandings, promises and representations, whether written or oral, with respect thereto are superseded by this

Agreement. No amendments, changes, additions, deletions or modifications to or of this Agreement shall be valid unless reduced to writing and signed by the Parties hereto.

19. ASSIGNMENT AND PERFORMANCE BY AFFILIATES. Neither Party shall assign or transfer this Agreement without the prior written consent of the other Party; provided, however, that either Party may assign this Agreement without the other Party's consent to one or more of its Affiliates or to a Third Party that merges with, consolidates with or acquires all or substantially all of the business or assets or voting control of the assigning Party, and any and all rights and obligations of either Party may be exercised or performed by its Affiliates, provided that such Affiliates agree to be bound by this Agreement and the applicable Party shall remain responsible for and liable for all acts and omissions of such Party's Affiliate.

20. THIRD PARTY RIGHTS. The Parties acknowledge that the counterparties to the Sponsor Intellectual Property Agreements shall be third party beneficiaries of this Agreement solely with respect to Sections 3.10.2, 11.1, 11.3, 11.7 and 11.8 of this Agreement, and solely to the extent that such Sections pertain to Sponsor Intellectual Property licensed under such Sponsor Intellectual Property Agreements.

21. INVALID PROVISION. If any provision of this Agreement is held to be illegal, invalid or unenforceable, the remaining provisions shall remain in full force and effect and will not be affected by the illegal, invalid or unenforceable provision. In lieu of the illegal, invalid or unenforceable provision, the Parties shall negotiate in good faith to agree upon a reasonable provision that is legal, valid and enforceable to carry out as nearly as practicable the original intention of the entire Agreement.

22. NO ADDITIONAL OBLIGATIONS. Sponsor and Regeneron have no obligation to renew this Agreement or apply this Agreement to any clinical trial other than the Studies. Neither Party is under any obligation to enter into another type of agreement at this time or in the future.

23. DISPUTE RESOLUTION AND JURISDICTION.

23.1. The Parties shall attempt in good faith to settle all disputes arising out of or in connection with this Agreement in an amicable manner. Any claim, dispute or controversy arising out of or relating to this Agreement, including the breach, termination or validity hereof or thereof, shall be governed by and construed in accordance with the substantive laws of the State of Delaware without giving effect to its choice of law principles. The Parties irrevocably and unconditionally submit to the exclusive jurisdiction of the United States District Court for the District of Delaware solely and specifically for the purposes of any action or proceeding arising out of or in connection with this Agreement.

23.2. Nothing contained in this Agreement shall deny either Party the right to seek injunctive or other equitable relief from a court of competent jurisdiction (without posting bond or other security) in the context of a bona fide emergency or prospective irreparable harm, and such an action may be filed or maintained notwithstanding any ongoing discussions between the Parties.

24. NOTICES. All notices or other communications that are required or permitted hereunder shall be in writing and delivered personally, sent by facsimile or, solely with respect to

notices to be delivered to Sponsor, via email (and promptly confirmed by personal delivery or overnight courier), or sent by internationally-recognized overnight courier addressed as follows:

If to Sponsor, to:

[***]

If to Regeneron, to:

[***]

25. RELATIONSHIP OF THE PARTIES. The relationship between the Parties is and shall be that of independent contractors, and does not and shall not constitute a partnership, joint venture, agency or fiduciary relationship. Neither Party shall have the authority to make any statements, representations or commitments of any kind, or take any actions, which are binding on the other Party, except with the prior written consent of the other Party to do so. All persons employed by a Party will be the employees of such Party and not of the other Party and all costs and obligations incurred by reason of any such employment shall be for the account and expense of such Party.

26. COUNTERPARTS AND DUE EXECUTION. This Agreement and any amendment may be executed in two (2) or more counterparts (including by way of facsimile or electronic transmission), each of which shall be deemed an original, but all of which together shall constitute one and the same instrument, notwithstanding any electronic transmission, storage and printing of copies of this Agreement from computers or printers. When executed by the Parties, this Agreement shall constitute an original instrument, notwithstanding any electronic transmission, storage and printing of copies of this Agreement from computers or printers. For clarity, facsimile signatures, electronic signatures and signatures transmitted via PDF shall be treated as original signatures.

27. CONSTRUCTION. Except where the context otherwise requires, wherever used, the singular will include the plural, the plural the singular, the use of any gender will be applicable to all genders, and the word "or" is used in the inclusive sense (and/or). Whenever this Agreement refers to a number of days, unless otherwise specified, such number refers to calendar days. The captions of this Agreement are for convenience of reference only and in no way define, describe, extend or limit the scope or intent of this Agreement or the intent of any provision contained in this Agreement. The term "including" as used herein shall be deemed to be followed by the phrase "without limitation" or like expression. The term "will" as used herein means shall. References to "Article," "Section" or "Appendix" are references to the numbered sections of this Agreement and the appendices attached to this Agreement, unless expressly stated otherwise. Except where the context otherwise requires, references to this "Agreement" shall include the appendices attached to this Agreement. The language of this Agreement shall be deemed to be the language mutually chosen by the Parties and no rule of strict construction will be applied against either Party hereto.

[Signature page follows]

IN WITNESS WHEREOF, the Parties have entered into this Agreement as of the Effective Date.

Regeneron Pharmaceuticals, Inc.	MAIA BIOTECHNOLOGY, Inc.
By: _____	By: _____
Name: [***]	Name: [***]
Title: [***]	Title: [***]
[***]	

[Signature Page to Supply and Non-Exclusive License Agreement]

APPENDIX A

PROTOCOL SYNOPSIS

[***]

APPENDIX B

Initial Study Plan for the THIO-101 Drug Supply Agreement

[***]

APPENDIX C

SPONSOR INTELLECTUAL PROPERTY AGREEMENTS

[***]

Exhibit 10.2

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) IS THE TYPE THAT THE REGISTRANT TREATS AS PRIVATE OR CONFIDENTIAL

PATENT & TECHNOLOGY LICENSE AGREEMENT
AGT. NO. L2664-MAIA BIOTECHNOLOGY

This Patent and Technology License Agreement ("Agreement") is between The Board of Regents ("Board") of The University of Texas System ("System"), an agency of the State of Texas whose address is 210 West 7th Street, Austin, Texas 78701 on behalf of The University of Texas Southwestern Medical Center ("UT Southwestern"), a component institution of System, whose address is 5323 Harry Hines Boulevard, Dallas, Texas 75390-9094 ("Licensor") and MAIA Biotechnology, Inc., a Delaware corporation, with its principal place of business at 444 West Lake Street, Suite 1700, Chicago, IL 60606 ("Licensee") (collectively, "Parties", or singly, "Party").

This Agreement has an "Effective Date" of the date of the last signature hereto.

No binding agreement between the Parties will exist until the Agreement has been signed by both Parties. Unsigned drafts of the Agreement shall not be considered offers.

Background

Licensor owns or controls Licensed Subject Matter (defined below). Licensee desires to secure the right and license to use, develop, manufacture, market, and commercialize the Licensed Subject Matter. Licensor has determined that such use, development, and commercialization of the Licensed Subject Matter is in the public's best interest and is consistent with Licensor's educational and research missions and goals. Licensor desires to have the Licensed Subject Matter developed and used for the benefit of Licensee, the inventors, Licensor, and the public.

NOW, THEREFORE, in consideration of the mutual covenants and premises herein contained, the Parties hereby agree as follows:

1. Definitions

"**Affiliate**" means any business entity more than 50% owned by Licensee, any business entity which owns more than 50% of Licensee, or any business entity that is more than 50% owned by a business entity that owns more than 50% of Licensee.

"**Combination Product**" means any product which contains a Licensed Product or Licensed Service and one or more other products, product components or processes that do not use Patent Rights or Technology Rights.

"**Common Stock**" means shares of Licensee's common stock, par value $0.0001 per share.

"**Contract Quarter**" means the three-month periods ending on March 31, June 30, September 30, and December 31, or any stub period thereof at the commencement of the Agreement or the expiration or termination of the Agreement.

"**Contract Year**" means the 12-month periods ending on December 31, or any stub period thereof at the commencement of the Agreement or the expiration or termination of the Agreement.

"**Derivative**" means with respect to a compound, any compound that is directed to the same biological target, [***]

"**Fair Market Value**" means the cash consideration an unaffiliated, unrelated buyer would pay in an arm's length sale of a substantially identical item sold in the same quantity, under the same terms, and at the same time and place.

"**First Commercial Sale**" means the first Sale of Licensed Product or Licensed Service by Licensee or any Sublicensee to a third party in a national jurisdiction following Regulatory Approval of such Licensed Product or Licensed Service in such national jurisdiction.

"**FDA**" means United States Food and Drug Administration or any successor agency thereto.

"**Field**" means all therapeutic, prophylactic and diagnostic fields of use for all indications, including discovery and development uses.

"**Government**" means any agency, department or other unit of the United States of America or the State of Texas.

"**Gross Consideration**" means all cash and non-cash consideration (e.g., securities).

"**Improvement**" means any patentable invention, or portion thereof, which (a) is conceived or reduced to practice solely by [***]

"Indication" means an intended use of any Licensed Product or Licensed Service requiring new clinical investigations essential to regulatory approval, and which is to be used in a disease which, in the practice of medicine, is different from any disease being treated by any Licensed Product or Licensed Service pursuant to regulatory approval, or to be treated upon receiving regulatory approval.

"**Initiation**" with respect to clinical studies means the date of first administration of a placebo or Licensed Product to a patient.

"**Inventors**" (or singly, "**Inventor**") means collectively and individually, inventors named in patents and patent applications listed in Exhibit A to the Agreement.

"**Licensed Process**" means a method or process whose practice or use is covered by a Valid Claim or uses Technology Rights.

"**Licensed Product**" means any product or component (i) whose manufacture, use, sale, offer for sale or import is covered by any Valid Claim or incorporates any Technology Rights, or (ii) which is made using a Licensed Process.

"**Licensed Service**" means performance of a service for any consideration using a Licensed Product, or the practice of a Licensed Process. For clarity, research and development of Licensed Products by Licensee or a Sublicensee does not constitute a Licensed Service.

"**Licensed Subject Matter**" means Patent Rights and/or Technology Rights.

"**Milestone Fees**" means all fees identified as Milestone Fees in Section 3.1(b).

"**Net Product Sales**" means the Gross Consideration from the Sale of Licensed Products [***]

In the event that the Licensed Products are Sold as part of a Combination Product, Net Product Sales from the Sale of such Combination Product shall be calculated by multiplying the Net Product Sales (as determined without reference to this paragraph) of such Combination Product by a fraction

(i) [***]

(ii) [***]

In the event that the average Gross Consideration cannot be determined for

(i) the Licensed Products without other therapeutically active components, or

(ii) the product containing the other therapeutically active components included in the Combination Product, [***]

[***]

"Net Sales" means Net Product Sales and/or Net Service Sales

"**Net Service Sales**" means the Gross Consideration received from the Sale of Licensed Services less the following items [***]

In the event that the Licensed Services are Sold as part of a Combination Product, Net Service Sales from the Sale of such Combination Product shall be calculated [***]

(i) [***]

(ii) [***]

In the event that the average Gross Consideration cannot be determined for

(i) the Licensed Services without other processes, or

(ii) [***]

[***]

"**Non-Royalty Sublicensing Consideration**" means the Gross Consideration received by the Licensee [***]

"**Patent Rights**" means the Licensor's rights in (a) the patents and patent applications listed in Exhibit A to the Agreement; (b) all non-provisional patent applications that claim priority to any provisional application listed in Exhibit A to the Agreement to the extent the claims of such non- provisional applications are entitled to claim priority to the aforesaid provisional patent applications; and (c) all divisionals, continuations, and such claims of continuations-in-part as are entitled to claim priority to the aforesaid patents and/or patent applications, and all reissues, reexaminations, and extensions of such patents and/or patent applications; (d) any patents that issue with respect to the aforesaid patent applications; and (e) foreign counterparts of any of the foregoing. From time to time during the term of the Agreement, upon written request by any Party to the other Party, Licensee and Licensor shall update, by written agreement in accordance with Section 19.6, the list of patent applications and patents listed in Exhibit A to the Agreement to include all Patent Rights.

"**Phase 1 Clinical Studies**" means that portion of the drug development and review process which provides for the initial introduction of an investigational new drug into humans, in a manner that is generally consistent with 21 CFR § 312.21(a), as amended (or its successor regulation), or an equivalent study in any national or multinational jurisdiction other than the United States.

"**Prosecution Counsel**" means the law firm, attorney or agent who is handling the prosecution of the Patent Rights in a given jurisdiction. Prosecution Counsel as of the Effective Date is identified in Exhibit A to the Agreement.

"**Quarterly Payment Deadline**" means the day that is 45 days after the last day of any particular Contract Quarter.

"**Regulatory Approval**" means any and all approvals, licenses, registrations, or authorizations of any Regulatory Authority in a particular national jurisdiction that are necessary to market, Sell and use a Licensed Product or Licensed Service in that national jurisdiction.

"**Regulatory Authority**" means any country, federal, supranational, state, or local regulatory agency, department, bureau, or other government entity responsible for granting any necessary licenses or approvals for the marketing, Sale and use of a Licensed Product or Licensed Service in a particular national jurisdiction, including

without limitation FDA, European Medicines Agency or Koseisho (i.e. the Japanese Ministry of Health and Welfare).

"**Sell**", "**Sale**" or "**Sold**" means any transfer or other disposition of Licensed Products or Licensed Services for which consideration is received by Licensee or Sublicensees. A Sale of Licensed Products or Licensed Services will be deemed completed at the time Licensee or its Sublicensee receives such consideration.

"**Sublicense Agreement**" means any agreement or arrangement pursuant to which Licensee (or Sublicensee) grants to any third party any of the license rights granted to the Licensee under the Agreement.

"**Sublicense Fee**" means the fee specified in Section 3.1(d).

"**Sublicensee**" means any entity to whom an express sublicense has been granted under the Patent Rights and/or Technology Rights. [***]

"**Technology Rights**" means Licensor's rights in technical information, know-how, processes, procedures, compositions, devices, methods, formulas, protocols, techniques, designs, drawings or data created before the Effective Date by Inventors at UT Southwestern and within the Field which are not covered by a Valid Claim but which are necessary or reasonably useful for practicing Patent Rights.

"**Territory**" means worldwide.

"Valid Claim" means a claim of (i) an issued and unexpired patent included within the Patent Rights unless the claim has been held unenforceable or invalid by the final, un-reversed, and un- appealable decision of a court or other government body of competent jurisdiction, has been irretrievably abandoned or disclaimed, or has otherwise been finally admitted or determined to be invalid, un-patentable or unenforceable, whether through reissue, reexamination, disclaimer or otherwise, or (ii) a pending patent application within the Patent Rights to the extent the claim continues to be prosecuted in good faith.

2. License Grant and Commercialization

2.1 Grant

(a) Licensor grants to Licensee a royalty-bearing exclusive license under the Patent Rights to develop, manufacture, have manufactured, distribute, have distributed, use, offer for Sale, Sell, lease, loan and/or import Licensed Products in the Field in the Territory and/or to perform Licensed Services in the Field in the Territory.

(b) Licensor grants to Licensee a royalty-bearing non-exclusive license under Technology Rights to develop, manufacture, have manufactured, distribute, have distributed, use, offer for Sale, Sell, lease, loan and/or

import Licensed Products in the Field in the Territory and/or to perform Licensed Services in the Field in the Territory.

(c) This grant is subject to (i) the payment by Licensee to Licensor of all consideration required under the Agreement, (ii) any rights of, or obligations to, the Government as set forth in Section 11.2 (Government Rights), and (iii) rights retained by Licensor to:

(1) Publish the scientific findings from research related to the Patent Rights; and

(2) Use the Licensed Subject Matter for teaching, research, education, and other educationally-related, non-commercial purposes; for the avoidance of doubt the purposes identified in this clause do not included clinical trials.

(3) Grant rights to, and transfer material embodiments of, the Licensed Subject Matter to other academic institutions or non-profit research institutions for the purposes identified in clauses (1) and (2) above.

(d) [***]

(e) Licensor reserves all rights not expressly granted in the Agreement and disclaims the grant of any implied rights to Licensee.

2.2 Sublicensing

Licensee has the right to grant Sublicense Agreements under the Licensed Subject Matter consistent with the terms of the Agreement, subject to the following:

(a) A Sublicense Agreement shall not exceed the scope and rights granted to Licensee hereunder. Sublicensee must agree in writing and the terms of the Sublicense Agreement must be consistent with the applicable terms and conditions of this Agreement. The Sublicense Agreement shall indicate that Licensor is a third party beneficiary of the Sublicense Agreement. [***]

(b) Licensee shall deliver to Licensor a true, complete, and correct copy of each Sublicense Agreement granted by Licensee or Sublicensee, and any modification or termination thereof, within 30 days following the applicable execution, modification, or termination of such Sublicense Agreement. If the Sublicense Agreement is not in English, Licensee shall provide Licensor an accurate English translation in addition to a copy of the original agreement.

(c) Notwithstanding any such Sublicense Agreement, Licensee will remain primarily liable to Licensor for all of the Licensee's duties and obligations contained in the Agreement, [***]

2.3 Diligent Commercialization

Licensee by itself or through its Sublicensees will use diligent efforts to make one or more Licensed Products and/or Licensed Services (as applicable) commercially available in the Field within the Territory. Without limiting the foregoing, Licensee will:

(a) maintain a bona fide, funded, ongoing and active research, development, manufacturing, regulatory, marketing or sales program (all as commercially reasonable) to make one or more Licensed Products and/or Licensed Services commercially available to the public as soon as commercially practicable

(b) Intentionally Omitted.

(c) any time after 2 years from the Effective Date and within 90 days after receiving written notice from Licensor's written request, provide written evidence satisfactory to Licensor that Licensee or its Sublicensee(s) has:

(i) Sales in non-oncology Indication; or

(ii) an effective, ongoing and active research, development, manufacturing, marketing or sales program as appropriate, directed toward obtaining regulatory approval, and/or production and/or Sales of a Licensed Product in non-oncology Indication.

If the Licensee's obligations under this Section 2.3 are not fulfilled, Licensor may treat such failure as a breach in accordance with Section 7.3(b).

3. Compensation

In consideration of rights granted to Licensee, Licensee will pay Licensor the following fees and royalties. All fees and royalties are not refundable and are not creditable against other fees and royalties. Each payment will reference the Agreement number and will be sent to Licensor's payment and accounting contact in Section 18 (Notices).

3.1 Non-Royalty Payments due from Licensee

(a) [***]

i. [***]

ii. [***]

iii. [***]

iv. [***]

(b) *Milestone Fees*. Following the achievement of any milestone event, Licensee will pay Licensor the corresponding Milestone Fee on or before the Quarterly Payment Deadline for the Contract Quarter in which the milestone event is achieved, as follows:

Milestone Events	**Milestone Fees**
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

[***]

(c) *License Upfront Fee*. [***]

(d) *Sublicense Fees*. Licensee will pay the following Non-Royalty Sublicense Fees on or before the Quarterly Payment Deadline for the Contract Quarter in which the applicable Non-Royalty Sublicensing Consideration is received by the Licensee:

Field of the Sublicense Agreement	**Sublicense Fee**
[***]	[***]
[***]	[***]

[***]

(e) *Assignment Fee*. [***]

3.2 Royalties

Licensee will pay Licensor the following running royalties for each Contract Year for Licensed Products and Licensed Services covered by a Valid Claim, payable on or before the Quarterly Payment Deadline for the last Contract Quarter of such Contract Year:

[***]	[***]	[***]
	[***]	[***]
[***]	[***]	[***]
	[***]	[***]

Payment of any such royalties shall be subject to the following:

(a) Licensee's obligation to pay royalties on Net Sales under this Section 3.2 shall continue, on a country-by-country basis, [***]

(b) [***]

(c) [***]

(d) [***]

[***]

(e) Upon expiration of the Royalty Term in a country, the licenses under Section 2.1 will become royalty-free, and fully-paid up in such country.

3.3 Royalty Stacking

(a) [***]

(b) [***]

3.4 Non-cash Consideration
[***]

4. Reports and Plans

The reports specified in this Section 4 will be sent to Licensor's payment and reporting contact identified in Section 18 (Notices). If Licensor reasonably requests to have information submitted in a particular format, Licensee will use reasonable efforts to comply with such request.

4.1 Quarterly Payment and Milestone Reports
[***]

(a) [***]

(b) [***]

(c) [***]

(d) [***]

(e) [***]

(f) [***]

(g) [***]

(h) [***]

(i) [***]

4.2 Biannual Progress Meeting and Annual Written Report

Until the First Commercial Sale, Licensee will meet with representatives of UT Southwestern (in person or by videoconference or teleconference, as agreed to by the Parties) semi-annually to provide an update on the Licensee, including (i) Licensee's efforts and accomplishments during the half year to develop and, if applicable, commercialize Licensed Products, and (ii) Licensee's development and commercialization plans with respect to Licensed Products for the next half year. The update shall also cover such activities by Sublicensees. Within 30 days following the end of each Contract Year until the first Sale of a Licensed Product or Licensed Service, Licensee will deliver to Licensor a true and accurate signed written progress report, which shall contain the following information to the extent relevant to the activities under the Agreement:

(a) [***]

(b) [***]

(c) [***]

(d) [***]

4.3 Government and Economic Development Reporting

If Licensor requests, Licensee will provide information for Licensor's Government and economic development reporting purposes, including, to the extent such information is required to be disclosed under federal or state law, the following:

(a) [***]

(b) [***]

(c) [***]

(d) [***]

This information shall be treated as Licensee's Confidential Information; provided that Licensor is entitled to combine such information with similar information from other Licensor licensees and publicly report such combined aggregate information, without identifying Licensee's separate specific applicable numbers. If and when Licensee has more than 200 full-time employees, then no further economic development reports will be required from Licensee.

5. Payment, Records, and Audits

5.1 Payments
All amounts referred to in the Agreement are expressed in U.S. dollars without deductions for taxes, assessments, fees, or charges of any kind. Each payment will reference the Agreement number set forth at the beginning of the Agreement. All payments to Licensor will be made in U.S. dollars by check or wire transfer (Licensee to pay all wire transfer fees) payable to the payee identified in Section 18 and sent to the payment and reporting contact in Section 18 (Notices).

5.2 Sales Outside the U.S.

If any currency conversion shall be required in connection with the calculation of payments hereunder, such conversion shall be made using the rate used by Licensee for its financial reporting purposes in accordance with Generally Accepted Accounting Principles (or foreign equivalent) [***]

5.3 Late Payments

Amounts that are not paid when due will accrue a late charge [***]

5.4 Records
For a period of five years after the Contract Year to which the records pertain, Licensee agrees that it and its Sublicensees will each keep complete and accurate records of their Sales, Net Product Sales, Net Service Sales, Milestone Fees, and Non-Royalty Sublicensing Consideration in sufficient detail to enable such payments to be determined and audited.

5.5 Auditing

[***]

6. Patent Expenses and Prosecution

6.1 Patent Expenses
Subject to Section 3.1(a), except as described below in this Section 6.1, Licensee shall pay for all patent services expenses, if any, incurred by Licensor following the Effective Date of this Agreement, [***]

6.2 Direction of Prosecution
Licensor will confer with Licensee to develop a strategy for the prosecution and maintenance of Patent Rights. [***]

6.3 Ownership
All patent applications and patents will be in the name of Licensor (and any co-owner identified in Exhibit A) and owned by Licensor (and such co-owner, if any). [***]

6.4 Foreign Filings
In addition to the U.S., the Patent Rights shall, subject to applicable bar dates, be pursued in such foreign countries as Licensee so designates in writing to Licensor in sufficient time to reasonably enable the preparation of such additional filings, and in those foreign countries in which Licensor has filed applications prior to the Effective Date. [***]

6.5 Withdrawal from Paying Patent Expenses
[***]

6.6 U.S. Patent and Trademark Office Entity Size Status
Licensee represents that as of the Effective Date the entity size status of Licensee in accordance with the regulations of the U.S. Patent and Trademark Office is as set forth in Exhibit A. Licensee will inform Licensor in writing on a timely basis of any change in its U.S. Patent and Trademark Office entity size status.

7. Term and Termination

7.1 Term
The term of the Agreement will commence on the Effective Date and continue until the earliest of: (i) termination as provided herein; (ii) the last date of expiration or termination of the Patent Rights; or, (iii) if Technology Rights are licensed and no Patent Rights are applicable, twenty (20) years after the Effective Date. [***]

7.2 Termination by Licensee
Licensee, at its option, may terminate the Agreement by providing Licensor written notice of intent to terminate, which such termination will be effective 90 days following receipt of such notice by Licensor.

7.3 Termination by Licensor
Licensor, at its option, may immediately terminate the Agreement, or any part of Licensed Subject Matter, or any part of the Field, or any part of the Territory, or the exclusive nature of the license grant, upon delivery of written notice to Licensee of Licensor's decision to terminate, if any of the following occur:

(a) Licensee becomes in arrears in any payments due under the Agreement, and Licensee fails to make the required payment within 30 days after delivery of written notice from Licensor; or

(b) Licensee is in breach of any material non-payment provision of the Agreement, and does not cure such breach within 60 days after delivery of written notice from Licensor.

(c) Licensor delivers notice to Licensee of three or more actual breaches of the Agreement in any 12-month period, even in the event that Licensee cures such breaches in the allowed period.

7.4 Other Conditions of Termination
The Agreement will terminate:

(a) [***]

(b) [***]

7.5 Effect of Termination
If the Agreement is terminated for any reason:

(a) All rights and licenses of Sublicensees shall terminate upon termination of the Agreement; provided however, if the Sublicense Agreement is for all of the Field for all of the Territory, and the Sublicensee is not then in breach of the Sublicense Agreement and agrees in writing to assume all of the obligations of Licensee and provides Licensor with written notice thereof within 30 days after notice of termination of the Agreement, then such Sublicense Agreement shall survive; and

(b) Licensee shall cease making, having made, distributing, having distributed, using, selling, offering to sell, leasing, loaning and importing any Licensed Products and performing Licensed Services by the effective date of termination; and

(c) Licensee shall tender payment of all accrued royalties and other payments due to Licensor as of the effective date of termination; and

(d) Intentionally Omitted.

(e) Nothing in the Agreement will be construed to release either Party from any obligation that matured prior to the effective date of termination; and

(f) The provisions of Sections 8 (Confidentiality), 9 (Infringement and Litigation), 11 (Representations and Disclaimers), 12 (Limit of Liability), 13 (Indemnification), 14 (Insurance), 17 (Use of Name), 18 (Notices), and 19 (General Provisions) will survive any termination or expiration of the Agreement. In addition, the provisions of Sections 3 (Compensation), 4.1 (Quarterly Payment and Milestone Reports), 5 (Payment, Records and Audits), and 6.1 (Patent Expenses) shall survive with respect to all activities and payment obligations accruing prior to the termination or expiration of the Agreement.

8. Confidentiality

8.1 Definition
"**Confidential Information**" means, with respect to any Party, all confidential or proprietary information or material regarding or embodying such Party's technology, products, business information or objectives, that is disclosed by or on behalf of such Party (the "Disclosing Party") to the other Party (the "Receiving

Party") in connection with the Agreement, but only to the extent that such information or material (i) if disclosed in tangible form, is marked "confidential" or otherwise designated in writing as "confidential" at the time of disclosure or within 30 days thereafter, (ii) if disclosed orally or in non- tangible form, is identified by the Disclosing Party as "confidential" at the time of disclosure and, within 30 days thereafter, the Disclosing Party provides a written summary of such information or material marked or otherwise designated in writing as "confidential", or (iii) is of the nature that it would be reasonable under the circumstances to be considered confidential or proprietary information or material of the Disclosing Party.

8.2 Protection and Marking

All Confidential Information of the Disclosing Party: (i) is to be held in strict confidence by the Receiving Party, (ii) is to be used by and under authority of the Receiving Party only as authorized in the Agreement, and (iii) shall not be disclosed by the Receiving Party, its agents or employees to any third party without the prior written consent of the Disclosing Party or as authorized in the Agreement. Licensee has the right to use and disclose Confidential Information of Licensor reasonably in connection with the exercise of its rights and performance of its obligations under the Agreement, including without limitation disclosing such Confidential Information to Sublicensees, potential investors, acquirers, and others on a need to know basis, if such Confidential Information is provided under conditions which reasonably protect the confidentiality thereof. The Receiving Party has the right to disclose the Disclosing Party's Confidential Information to its agent and employees to the extent necessary for the Receiving Party to exercise its rights or perform its obligations under the Agreement, provided that each agent and employee receiving such Confidential Information is subject to appropriate confidentiality obligations substantially similar to those of this Section 8. Each Party's obligation of confidence hereunder includes, without limitation, using at least the same degree of care with the disclosing Party's Confidential Information as it uses to protect its own Confidential Information, but always at least a reasonable degree of care. The Receiving Party shall be solely liable for any disclosure or use of the Disclosing Party's Confidential Information in

violation of this Agreement by any agents, employees, advisors, actual or potential Sublicensees, acquirers or investors of the Receiving Party.

8.3 Confidentiality of Terms of Agreement

Each Party agrees not to disclose to any third party the terms of the Agreement without the prior written consent of the other Party hereto, except each Party may disclose the terms of the Agreement: (a) to advisors, actual or potential Sublicensees, acquirers or investors on a need to know basis, in each case, under appropriate confidentiality obligations substantially similar to those of this Section 8; and (b) to the extent necessary, in the reasonable opinion of the Receiving Party's counsel, to comply with applicable laws, regulations and court orders (including, without limitation, The Texas Public Information Act, as may

be amended from time to time, other open records laws, decisions and rulings, and securities laws, regulations and guidance). If the Agreement is not for all fields of use, then Licensor may disclose the Field to other potential third party licensees. Notwithstanding the foregoing, the existence of the Agreement shall not be considered Confidential Information.

8.4 Disclosure Required by Court Order or Law

If the Receiving Party is required to disclose Confidential Information of another Party hereto, or any terms of the Agreement, pursuant to the order or requirement of a court, administrative agency, or other governmental body or applicable law, the Receiving Party may disclose such Confidential Information or terms to the extent required, provided that the Receiving Party shall provide the Disclosing Party with reasonable advance notice thereof (unless prohibited by law) to enable the Disclosing Party to seek a protective order and otherwise seek to prevent such disclosure. To the extent that Confidential Information so disclosed does not become part of the public domain by virtue of such disclosure, it shall remain Confidential Information protected pursuant to Section 8.

8.5 Copies

Each Party agrees not to copy or record any of the Confidential Information of the other Party, except as reasonably necessary to exercise its rights or perform its obligations under the Agreement, and for archival and legal purposes.

8.6 Continuing Obligations

Subject to the exclusions listed in Section 8.7, the Parties' confidentiality obligations under the Agreement will survive termination of the Agreement and will continue for a period of five years thereafter.

8.7 Exclusions

Information shall not be considered Confidential Information of a Disclosing Party under the Agreement to the extent that the Receiving Party can establish by competent written proof that such information:

(a) Was in the public domain at the time of disclosure; or

(b) Later became part of the public domain through no act or omission of the Receiving Party, its employees, agents, successors or assigns in breach of the Agreement; or

(c) Was lawfully disclosed to the Receiving Party by a third party having the right to disclose it not under an obligation of confidentiality; or

(d) Was already known by the Receiving Party at the time of disclosure; or

(e) Was independently developed by the Receiving Party without use of the disclosing Party's Confidential Information.

8.8 Copyright Notice
The placement of a copyright notice on any Confidential Information will not be construed to mean that such information has been published and will not release the other Party from its obligation of confidentiality hereunder.

8.9 Remedies
In the event of a breach, threatened breach or intended breach of the terms of this Section 8 by either of the Parties, the Disclosing Party, in addition to any other rights and remedies available to it at law or in equity, shall be entitled to seek preliminary and final injunctions, enjoining and restraining such breach, threatened breach or intended breach of such Disclosing Party's Confidential Information.

9. Infringement and Litigation

9.1 Notification
If either Licensor's designated office for technology commercialization or Licensee becomes aware of any infringement or potential infringement of Patent Rights, each Party shall promptly notify the other of such in writing.

9.2 Licensee's Enforcement Rights
Licensee may enforce the Patent Rights against any infringement by a third party. [***]

9.3 Licensor's Enforcement Rights
If Licensee does not file suit within six months after a written request by Licensor to initiate an infringement action, then Licensor shall have the right, at its sole discretion, to bring suit to enforce any Patent Right licensed hereunder against the infringing activities, with Licensor retaining all recoveries from such enforcement. [***]

9.4 Cooperation between Licensor and Licensee
In any infringement suit or dispute, the Parties agree to cooperate fully with each other. [***]

[***]

10. Export Compliance

Licensee understands that the Arms Export Control Act (AECA), including its implementing International Traffic In Arms Regulations (ITAR), and the Export Administration Act (EAA), including its Export Administration Regulations (EAR), are some (but not all) of the laws and regulations that comprise the U.S. export laws and regulations. Licensee further understands that the U.S. export laws and regulations include (but are not limited to): (a) ITAR and EAR product/service/data- specific requirements; (b) ITAR and EAR ultimate destination-specific requirements; (c) ITAR and EAR end user-specific requirements; (d) Foreign Corrupt Practices Act; and (e) anti-boycott laws and regulations. Licensee will comply with all then-current applicable

export laws and regulations of the U.S. Government (and other applicable U.S. laws and regulations) pertaining to the Licensed Products and Licensed Services (including any associated products, items, articles, computer software, media, services, technical data, and other information). Licensee certifies that it will not, directly or indirectly, export (including any deemed export), nor re-export (including any deemed re-export) the Licensed Products and Licensed Services (including any associated products, items, articles, computer software, media, services, technical data, and other information) in violation of applicable U.S. laws and regulations. Licensee will include a provision in its agreements, substantially similar to this Section 10, with its Sublicensees, third party wholesalers and distributors, and physicians, hospitals or other healthcare providers who purchase a Licensed Product, requiring that these parties comply with all then-current applicable U.S. export laws and regulations and other applicable U.S. laws and regulations.

11. Representations and Disclaimers

11.1 Licensor Representations
[***]

11.2 Government Rights
[***]

11.3 Licensor Disclaimers
EXCEPT AS SPECIFICALLY SET FORTH IN SECTION 11.1, LICENSEE UNDERSTANDS AND AGREES THAT LICENSOR MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, AS TO THE LICENSED PRODUCTS OR LICENSED SERVICES, OR AS TO THE OPERABILITY OR FITNESS FOR ANY USE OR PARTICULAR PURPOSE, MERCHANTABILITY, SAFETY, EFFICACY, APPROVABILITY BY REGULATORY AUTHORITIES, TIME AND COST OF DEVELOPMENT, PATENTABILITY, AND/OR BREADTH OF PATENT RIGHTS. [***]

11.4 Licensee Representations
By execution of the Agreement, Licensee represents, acknowledges, covenants and agrees

(a) that Licensee has not been induced in any way by Licensor or its employees to enter into the Agreement, and (b) that Licensee has been given an opportunity to conduct sufficient due diligence with respect to all items and issues pertaining to this Section 11 (Representations and Disclaimers) and all other matters pertaining to the Agreement; and

(b) that Licensee has adequate knowledge and expertise, or has utilized knowledgeable and expert consultants, to adequately conduct the due diligence, and (d) that Licensee accepts all risks inherent herein. Licensee represents that it is a duly organized, validly existing entity of the form

indicated in the preamble to the Agreement, and is in good standing under the laws of its jurisdiction of organization as indicated in the preamble of the Agreement, and has all necessary corporate or other appropriate power and authority to execute, deliver and perform its obligations hereunder.

12. Limit of Liability

IN NO EVENT SHALL LICENSOR, THE UNIVERSITY SYSTEM IT GOVERNS, ITS MEMBER INSTITUTIONS, INVENTORS, REGENTS, OFFICERS, EMPLOYEES, STUDENTS, AGENTS OR AFFILIATED ENTERPRISES, BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, INCIDENTAL, EXEMPLARY, OR PUNITIVE DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS OR REVENUE) ARISING OUT OF OR IN CONNECTION WITH THE AGREEMENT OR ITS SUBJECT MATTER, REGARDLESS OF WHETHER ANY SUCH PARTY KNOWS OR SHOULD KNOW OF THE POSSIBILITY OF SUCH DAMAGES. [***]

13. Indemnification

13.1 Indemnification Obligation
Subject to Section 13.2, Licensee agrees to hold harmless, defend and indemnify Licensor, the university system it governs, its member institutions, its Regents, officers, employees, students and agents as well as any entity listed in Exhibit A as a co-owner of any licensed patent, along with their respective officers, employees, students and agents (collectively the "**Indemnified Parties**") from and against any liabilities, damages, causes of action, suits, judgments, liens, penalties, fines, losses, costs and expenses (including, without limitation, reasonable attorneys' fees and other expenses of litigation) (collectively "**Liabilities**") resulting from claims or demands brought by third parties against an Indemnified Party on account of any injury or death of persons, damage to property, or any other damage or loss arising out of or in connection with the Agreement or the exercise or practice by or under authority of Licensee or its Sublicensees, or third party wholesalers or distributors, or physicians, hospitals or other healthcare providers who purchase a Licensed Product, of the rights granted hereunder.

13.2 Conditions of Indemnification
[***]

14. Insurance

14.1 Insurance Requirements
Prior to any Licensed Product being used or Sold (including for the purpose of obtaining Regulatory Approval), and prior to any Licensed Service being performed by Licensee or by a Sublicensee, and for a period of five years after the Agreement expires or is terminated, Licensee shall, at its sole cost and expense, procure and maintain commercial general liability insurance in commercially

reasonable and appropriate amounts for the Licensed Product being used or Sold or the Licensed Service being performed. [***][***]

14.2 Evidence of Insurance and Notice of Changes
[***]

15. Assignment

The Agreement may not be assigned by Licensee without the prior written consent of Licensor, which consent will not be unreasonably withheld. For clarity, an assignment shall not include any sublicensing by MAIA Biotechnology to a MAIA Affiliate. A merger or other transaction in which the equity holders of Licensee prior to such event hold less than a majority of the equity of the surviving or acquiring entity shall be considered an assignment of the Agreement. [***]

16. Governmental Markings

16.1 Patent Markings
Licensee agrees that all Licensed Products Sold by Licensee or Sublicensees within the United States will be marked in accordance with 35 U.S.C. § 287. Licensee agrees that all Licensed Products and/or Services Sold by Licensee or Sublicensees outside the United States will be marked in accordance with the relevant laws and regulations established in those other jurisdictions.

16.2 Governmental Approvals and Marketing of Licensed Products and/or Licensed Services Licensee will be responsible for obtaining all necessary governmental approvals for the development, production, distribution, Sale, and use of any Licensed Product or performance of any Licensed Service, at Licensee's expense, including, without limitation, any safety studies. Licensee will have sole responsibility for any warning labels, packaging and instructions as to the use and the quality control for any Licensed Product or Licensed Service.

16.3 Foreign Registration and Laws
Licensee agrees to register the Agreement with any foreign governmental agency that requires such registration and Licensee will pay all costs and legal fees in connection with such registration. Licensee is responsible for compliance with all foreign laws affecting the Agreement or the Sale of Licensed Products and Licensed Services to the extent there is no conflict with United States law, in which case United States law will control.

17. Use of Name

Neither Party will use the name, trademarks or other marks of the other Party (including, in the case of Licensor, the name of the university system it governs, its member institutions, any of its Regents or employees) without the advance written consent of the other Party. Notwithstanding the foregoing, Licensor may use Licensee's name and/or logo for various reports required by governmental law, rule or regulation and for internal reports without the prior written consent of the Licensee.

18. Notices

Any notice or other communication of the Parties required or permitted to be given or made under the Agreement will be in writing and will be deemed effective when sent in a manner that provides confirmation or acknowledgement of delivery and received at the address set forth below (or as changed by written notice pursuant to this Section 18).

Licensee Contacts	**Licensor Contacts**
Contact for Notice: Vlad Vitoc, MD, MBA Chief Executive Officer MAIA Biotechnology, Inc. 444 West Lake Street, Suite 1700 Chicago, IL 60606 Office: [***] Cell: [***] Email: [***]	Contact for Notice: UT Southwestern Medical Center Office for Technology Development Attn: Director for Technology Commercialization 5323 Harry Hines Boulevard, Dallas, Texas 75390-9094 Fax: [***] Phone: [***] E-mail: [***][***] Payment and financial reporting contact: Checks in U.S. dollars payable to "UT SOUTHWESTERN" referencing L2664-MAIA, UT Southwestern Medical Center Lock Box 845477 Dallas, Texas 75284-5477
Patent prosecution contact: [***]	Patent prosecution contact: Attn: Director for Technology Commercialization Office for Technology Development 5323 Harry Hines Boulevard, Dallas, Texas 75390-9094 Fax: [***] Phone: [***] E-mail: [***]

Notices required under the Agreement may be delivered [***] provided such notice is confirmed in writing as indicated. Notices shall be provided to each Party as specified in the "Contact for Notice" address. Each Party shall update the other Party in writing with any changes in such contact information.

19. General Provisions

19.1 Binding Effect

The Agreement is binding upon and inures to the benefit of the Parties hereto, their respective executors, administrators, heirs, permitted assigns, and permitted successors in interest.

19.2 Construction of Agreement

Headings are included for convenience only and will not be used to construe the Agreement. The Parties acknowledge and agree that both Parties substantially participated in negotiating the provisions of the Agreement; therefore, both Parties agree that any ambiguity in the Agreement shall not be construed more favorably toward one Party than the other Party, regardless of which Party primarily drafted the Agreement.

19.3 Counterparts and Signatures

The Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which taken together shall constitute one and the same instrument. A Party may evidence its execution and delivery of the Agreement by transmission of a signed copy of the Agreement via facsimile or email. In such event, the Party shall promptly provide the original signature page(s) to the other Party.

19.4 Compliance with Laws

Licensee will comply with all applicable national, state and local laws and regulations, including, without limitation, all export laws and regulations.

19.5 Governing Law

The Agreement will be construed and enforced in accordance with laws of the U.S. and the State of Texas, without regard to choice of law and conflicts of law principles.

19.6 Modification

Any modification of the Agreement will be effective only if it is in writing and signed by duly authorized representatives of both Parties. No modification will be made by email communications.

19.7 Severability

If any provision hereof is held to be invalid, illegal or unenforceable in any jurisdiction, the Parties hereto shall negotiate in good faith a valid, legal and enforceable substitute provision that most nearly reflects the original intent of the Parties, and all other provisions hereof shall remain in full force and effect in such jurisdiction and shall be construed in order to carry out the intentions of the Parties hereto as nearly as may be possible. Such invalidity, illegality or unenforceability shall not affect the validity, legality or enforceability of such other provisions in any other jurisdiction, so long as the essential essence of the Agreement remains enforceable.

19.8 Third Party Beneficiaries

Nothing in the Agreement, express or implied, is intended to confer any benefits, rights or remedies in this Agreement on any entity, other than the Parties and their permitted successors and assigns.

19.9 Waiver
Neither Party will be deemed to have waived any of its rights under the Agreement unless the waiver is in writing and signed by such Party. No delay or omission of a Party in exercising or enforcing a right or remedy under the Agreement shall operate as a waiver thereof.

19.10 Sovereign Immunity
Nothing in the Agreement shall be deemed or treated as any waiver of Licensor's sovereign immunity.

19.11 Entire Agreement
The Agreement constitutes the entire Agreement between the Parties regarding the subject matter hereof, and supersedes all prior written or verbal agreements, representations and understandings relative to such matters.

19.12 Claims Against Licensor for Breach of Agreement
Licensee acknowledges that any claim for breach of the Agreement asserted by Licensee against Licensor shall be subject to Chapter 2260 of the Texas Government Code and that the process provided therein shall be Licensee's sole and exclusive process for seeking a remedy for any and all alleged breaches of the Agreement by Licensor or the State of Texas.

20. No Other Promises and Agreements; Representation by Counsel.

Licensee expressly warrants and represents and does hereby state and represent that no promise or agreement which is not herein expressed has been made to Licensee in executing the Agreement except those explicitly set forth herein, and that Licensee is not relying upon any statement or representation of Licensor or its representatives. Licensee is relying on Licensee's own judgment and has had the opportunity to be represented by legal counsel. Licensee hereby warrants and represents that Licensee understands and agrees to all terms and conditions set forth in the Agreement.

IN WITNESS WHEREOF, the Parties hereto have caused their duly authorized representatives to execute this Patent License Agreement.

LICENSOR: BOARD OF REGENTS OF THE UNIVERSITY OF TEXAS SYSTEM

By: _____
Arnim Dontes
Executive Vice President for Business Affairs
UT Southwestern Medical Center

Date _____

LICENSEE: MAIA Biotechnology, Inc.

By: _____
Vlad Vitoc
Chief Executive Office

Date: _____

Approved as to Content:

By: _____

Claire Aldridge Vice President,
Commercialization and Business
Development UT
Southwestern Medical Center

EXHIBIT A TO
PATENT LICENSE AGREEMENT

PATENT RIGHTS

App. No./ Date of Filing	Title/ UTSW Ref. No.	Jointly Owned? (Y/N; if Y, with whom?)	Prosecution Counsel
US Provisional Application 61/809,575 Filed 4/8/2013 Expired 4/8/2014	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 PZ US)	□Yes ☒No	Parker Highlander, PLLC
PCT Application PCT/US14/33330 Filed 4/8/2014 Expired 11/8/2015	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 WO)	□Yes ☒No	Parker Highlander, PLLC
US Application 14/247,967 Filed 4/8/2014	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 US)	□Yes ☒No	Parker Highlander, PLLC
Australian Patent 2014251093 Issued 9/28/2017	Mercaptopurine Ribonucleoside Analogues for Altering Telomerase Mediated Telomere (UTSD: 2664 AU)	□Yes ☒No	Parker Highlander, PLLC
Brazilian Application BR112015025206-0 Filed 4/8/2014	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 BR)	□Yes ☒No	Parker Highlander, PLLC
Canadian Application 2,907,924 Filed 4/8/2014	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 CA)	□Yes ☒No	Parker Highlander, PLLC
Chinese Application 201480032692.6 Filed 4/8/2014	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 CN)	□Yes ☒No	Parker Highlander, PLLC
EPO Application 20155920 Filed 4/8/2014	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 EP)	□Yes ☒No	Parker Highlander, PLLC
Indian Application 9183/DELNP/2015	Telomerase Mediated Telomere Altering	□Yes ☒No	Parker Highlander, PLLC
Filed 4/8/2014	Compounds (UTSD: 2664 IN)		
Mexican Application MX/a/2015/014159 Filed 4/8/2014	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 MX)	□Yes☒No	Parker Highlander, PLLC

Singapore Application 11201508336T (Aband.) Filed 4/8/2014	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 SG)	□Yes ☒No	Parker Highlander, PLLC
Singapore Application 102020002556Q Filed 3/10/2020	Mercaptopurine Ribonucleoside Analogues for Altering Telomerase Mediated Telomere	□Yes ☒No	Parker Highlander, PLLC
China 201910445731.X Filed 5/27/2019	Mercaptopurine Ribonucleoside Analogues for Altering Telomerase Mediated Telomere	□Yes ☒No	Parker Highlander, PLLC
Europe 14726468.3 (withdrawn) Filed 4/8/2014	Mercaptopurine Ribonucleoside Analogues for Altering Telomerase Mediated Telomere	□Yes ☒No	Parker Highlander, PLLC
South African Application 2015/07196 Filed 4/8/2014	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 ZA)	□Yes ☒No	Parker Highlander, PLLC
Japanese Application 2016-507608 Filed 4/8/2014	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 JP)	□Yes ☒No	Parker Highlander, PLLC
New Zealand Application 713498 Issued 10/31/2017	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 NZ)	□Yes ☒No	Parker Highlander, PLLC
New Zealand Divisional Application 732228 Filed 4/8/2014	Mercaptopurine Ribonucleoside Analogues for Altering Telomerase Mediated Telomere (UTSD: 2664 NZ DIV 1)	□Yes ☒No	Parker Highlander, PLLC
South Korean Application 10-2015-7031880 Filed 4/8/2014; Abandoned on 7/28/2017	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 KR)	□Yes ☒No	Parker Highlander, PLLC
Russian Application ☐☐☐☐☐2015147555 Filed 4/8/2014	Telomerase Mediated Telomere Altering Compounds (UTSD: 2664 RU)	□Yes ☒No o	Parker Highlander, PLLC
Hong Kong Application 16107437.8 Filed 6/27/2016	Mercaptopurine Ribonucleoside Analogues for Altering Telomerase Mediated Telomere (UTSD: 2664 HK)	□Yes ☒No	Parker Highlander, PLLC
USPTO Entity Status as of Effective Date	Check one box: ☒Small □Large		

US Provisional Application 62/342,593 Filed 5/27/2016 Expired 5/27/2017	6-Thio-2'-Deoxyguanosine (6-Thio-Dg) Results In Telomerase Dependent Telomere Dysfunction And Cell Death In Various Models Of Therapy-Resistant Cancer Cells (UTSD:3243)	☒Yes, w/THE WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ☐	Parker Highlander, PLLC
PCT Application PCT/US17/34706 Filed 5/26/17	6-Thio-2'-Deoxyguanosine (6-Thio-Dg) Results In Telomerase Dependent Telomere Dysfunction And Cell Death In Various Models Of Therapy-Resistant Cancer Cells (UTSD:3243)	☒Yes, w/THE WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ☐	Parker Highlander, PLLC
Australia 2017/271,615 Filed 12/4/2018	6-Thio-2'-Deoxyguanosine (6-Thio-Dg) Results In Telomerase Dependent Telomere Dysfunction And Cell Death In Various Models Of Therapy-Resistant Cancer Cells (UTSD:3243)	☒Yes, w/THE WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ☐	Parker Highlander, PLLC
Canada 3,025,522 Filed 5/26/2017	6-Thio-2'-Deoxyguanosine (6-Thio-Dg) Results In Telomerase Dependent Telomere Dysfunction And Cell Death In Various Models Of Therapy-Resistant Cancer Cells (UTSD:3243)	☒Yes, w/THE WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ☐	Parker Highlander, PLLC
Europe 17803670.3 Filed 5/26/2017	6-Thio-2'-Deoxyguanosine (6-Thio-Dg) Results In Telomerase Dependent Telomere Dysfunction And Cell Death In Various Models Of Therapy-Resistant Cancer Cells (UTSD:3243)	☒Yes, w/THE WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ☐	Parker Highlander, PLLC
South Africa 2018/08276 Filed 12/7/2018	6-Thio-2'-Deoxyguanosine (6-Thio-Dg) Results In Telomerase Dependent Telomere Dysfunction And Cell Death In Various Models Of Therapy-Resistant Cancer Cells (UTSD:3243)	☒Yes, w/THE WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ☐	Parker Highlander, PLLC
United States 16/304,538 Filed 5/26/2017	6-Thio-2'-Deoxyguanosine (6-Thio-Dg) Results In Telomerase Dependent Telomere Dysfunction And Cell Death In Various Models Of Therapy-Resistant Cancer Cells (UTSD:3243)	☒Yes, w/THE WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ☐	Parker Highlander, PLLC
USPTO Entity Status as of Effective Date	Check one box: ☒Small ☐Large		

US Provisional Application 62/646,820 Filed 3/22/2018	Use Of 6-thio-dG To Treat Therapy-Resistant Telomerase positive Pediatric Brain Tumors (UTSD: 3596)	□Yes, w/Cincinnati Children's Hospital Medical Center[] ☒	Parker Highlander, PLLC
PCT PCT/US19/023596 Filed 3/22/2019	Use Of 6-thio-dG To Treat Therapy-Resistant Telomerase positive Pediatric Brain Tumors (UTSD: 3596)	□Yes, w/Cincinnati Children's Hospital Medical Center	Parker Highlander, PLLC
USPTO Entity Status as of Effective Date		Check one box: ☒ Small □ Large	
US Provisional Application 62/312,982 Filed 3/24/2016 Expired 3/24/2017	Treatment Of Drug Resistant Proliferative Diseases With Telomerase Mediated Telomere Altering Compounds (UTSD:3242)	□ Yes ☒ No	Parker Highlander, PLLC
PCT Application PCT/US17/34706 Filed 3/23/2017 Expired 10/24/2018	Treatment Of Drug Resistant Proliferative Diseases With Telomerase Mediated Telomere Altering Compounds (UTSD:3242)	□ Yes ☒ No	Parker Highlander, PLLC
US Application 15/467,862 (Aband.) Filed 3/23/2017	Treatment Of Drug Resistant Proliferative Diseases With Telomerase Mediated Telomere Altering Compounds (UTSD:3242)	□ Yes ☒ No	Parker Highlander, PLLC
PCT Application PCT/US17/023858 Filed 3/23/2017	Treatment of Drug Resistant Proliferative Diseases with Telomerase Mediated Telomere Altering Componds (UTSD:3242)	□ Yes ☒ No	Parker Highlander, PLLC
U.S. Appl. 16/450,430 Filed 6/24/2019	Treatment of Drug Resistant Proliferative Diseases with Telomerase Mediated Telomere Altering Componds (UTSD:3242)	□ Yes ☒ No	Parker Highlander, PLLC
USPTO Entity Status as of Effective Date		Check one box: ☒ Small □ Large	

Exhibit 10.3

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) IS THE TYPE THAT THE REGISTRANT TREATS AS PRIVATE OR CONFIDENTIAL

PATENT & TECHNOLOGY LICENSE AGREEMENT
AGT. NO. L3648-MAIA BIOTECHNOLOGY

This Patent and Technology License Agreement ("Agreement") is between The Board of Regents ("Board") of The University of Texas System ("System"), an agency of the State of Texas whose address is 210 West 7th Street, Austin, Texas 78701 on behalf of The University of Texas Southwestern Medical Center ("UT Southwestern"), a component institution of System, whose address is 5323 Harry Hines Boulevard, Dallas, Texas 75390-9094 ("Licensor") and MAIA Biotechnology, Inc., a Delaware corporation, with its principal place of business at 444 West Lake Street, Suite 1700, Chicago, IL 60606 ("Licensee") (collectively, "Parties", or singly, "Party").

This Agreement has an "Effective Date" of the date of the last signature hereto.

No binding agreement between the Parties will exist until the Agreement has been signed by both Parties. Unsigned drafts of the Agreement shall not be considered offers.

Background

Licensor and Licensee have previously entered into "Patent & Technology License Agreement Agt. No. L2664-MAIA Biotechnology," as amended, which was executed December 8, 2020. This agreement and all of its exhibits and schedules and including any and all amendments to any of the foregoing will be referred to collectively in this agreement as the "Original Agreement." As set forth in the Original Agreement, Licensee had the option to obtain additional licenses to technology developed by the Licensor. The instant Agreement between the Licensor and Licensee is directed to granting Licensee such additional license rights.

In that regard, Licensor owns or controls Licensed Subject Matter (defined below). Licensee desires to secure the right and license to use, develop, manufacture, market, and commercialize the Licensed Subject Matter. Licensor has determined that such use, development, and commercialization of the Licensed Subject Matter is in the public's best interest and is consistent with Licensor's educational and research missions and goals. Licensor desires to have the Licensed Subject Matter developed and used for the benefit of Licensee, the inventors, Licensor, and the public.

NOW, THEREFORE, in consideration of the mutual covenants and premises herein contained, the Parties hereby agree as follows:

1. Definitions

"**Affiliate**" means any business entity more than 50% owned by Licensee, any business entity which owns more than 50% of Licensee, or any business entity that is more than 50% owned by a business entity that owns more than 50% of Licensee.

"**Combination Product**" means any product which contains a Licensed Product or Licensed Service and one or more other products, product components or processes that do not use Patent Rights or Technology Rights.

"**Common Stock**" means shares of Licensee's common stock, par value $0.0001 per share.

"**Contract Quarter**" means the three-month periods ending on March 31, June 30, September 30, and December 31, or any stub period thereof at the commencement of the Agreement or the expiration or termination of the Agreement.

"**Contract Year**" means the 12-month periods ending on December 31, or any stub period thereof at the commencement of the Agreement or the expiration or termination of the Agreement.

"**Derivative**" means with respect to a compound, any compound that is directed to the same biological target, [***]

"**Fair Market Value**" means the cash consideration an unaffiliated, unrelated buyer would pay in an arm's length sale of a substantially identical item sold in the same quantity, under the same terms, and at the same time and place.

"**First Commercial Sale**" means the first Sale of Licensed Product or Licensed Service by Licensee or any Sublicensee to a third party in a national jurisdiction following Regulatory Approval of such Licensed Product or Licensed Service in such national jurisdiction.

"**FDA**" means United States Food and Drug Administration or any successor agency thereto.

"**Field**" means all therapeutic, prophylactic and diagnostic fields of use for all indications, including discovery and development uses.

"**Government**" means any agency, department or other unit of the United States of America or the State of Texas.

"**Gross Consideration**" means all cash and non-cash consideration (e.g., securities).

"**Improvement**" means any patentable invention, or portion thereof, which (a) is conceived or reduced to practice solely by [***]

"Indication" means an intended use of any Licensed Product or Licensed Service requiring new clinical investigations essential to regulatory approval, and which is to be used in a disease which, in the practice of medicine, is different from any disease being treated by any Licensed Product or Licensed Service pursuant to regulatory approval, or to be treated upon receiving regulatory approval.

"**Initiation**" with respect to clinical studies means the date of first administration of a placebo or Licensed Product to a patient.

"**Inventors**" (or singly, "**Inventor**") means collectively and individually, inventors named in patents and patent applications listed in Exhibit A to the Agreement.

"**Licensed Process**" means a method or process whose practice or use is covered by a Valid Claim or uses Technology Rights.

"**Licensed Product**" means any product or component (i) whose manufacture, use, sale, offer for sale or import is covered by any Valid Claim or incorporates any Technology Rights, or (ii) which is made using a Licensed Process.

"**Licensed Service**" means performance of a service for any consideration using a Licensed Product, or the practice of a Licensed Process. For clarity, research and development of Licensed Products by Licensee or a Sublicensee does not constitute a Licensed Service.

"**Licensed Subject Matter**" means Patent Rights and/or Technology Rights.

"**Milestone Fees**" means all fees identified as Milestone Fees in Section 3.1(b).

"**Net Product Sales**" means the Gross Consideration from the Sale of Licensed Products [***]

In the event that the Licensed Products are Sold as part of a Combination Product, Net Product Sales from the Sale of such Combination Product shall be calculated by multiplying the Net Product Sales (as determined without reference to this paragraph) of such Combination Product by a fraction

(i) [***]

(ii) [***]

In the event that the average Gross Consideration cannot be determined for

(i) the Licensed Products without other therapeutically active components, or

(ii) the product containing the other therapeutically active components included in the Combination Product[***]

[***]

"Net Sales" means Net Product Sales and/or Net Service Sales

"**Net Service Sales**" means the Gross Consideration received from the Sale of Licensed Services less the following items [***]

In the event that the Licensed Services are Sold as part of a Combination Product, Net Service Sales from the Sale of such Combination Product shall be calculated [***]

(i) [***]

(ii) [***]

In the event that the average Gross Consideration cannot be determined for

(i) the Licensed Services without other processes, or

(ii) the services containing the other processes included in the Combination Product, [***]

[***]

"**Non-Royalty Sublicensing Consideration**" means the Gross Consideration received by the Licensee [***]

"Original Agreement" means the "Patent & Technology License Agreement Agt. No. L2664-MAIA Biotechnology," and all of its exhibits and schedules, entered into by and between the Parties on November 29th, 2018, as amended on December 8, 2020.

"**Patent Rights**" means the Licensor's rights in (a) the patents and patent applications listed in Exhibit A to the Agreement; (b) all non-provisional patent applications that claim priority to any provisional application listed in Exhibit A to the Agreement to the extent the claims of such non- provisional applications are entitled to claim priority to the aforesaid provisional patent applications; and (c) all divisionals, continuations, and such claims of continuations-in-part as are entitled to claim priority to the aforesaid patents and/or patent applications, and all reissues, reexaminations, and extensions of such patents and/or patent applications; (d) any patents that issue with respect to the aforesaid patent applications; and (e) foreign counterparts of any of the foregoing. From time to time during the term of the Agreement, upon written request by any Party to the other Party, Licensee and Licensor shall update, by written agreement in accordance with Section 19.6, the list of patent applications and patents listed in Exhibit A to the Agreement to include all Patent Rights.

"**Phase 1 Clinical Studies**" means that portion of the drug development and review process which provides for the initial introduction of an investigational new drug into humans, in a manner that is generally consistent with 21 CFR § 312.21(a), as amended (or its successor regulation), or an equivalent study in any national or multinational jurisdiction other than the United States.

"**Prosecution Counsel**" means the law firm or attorney who is handling the prosecution of the Patent Rights. Prosecution Counsel as of the Effective Date is identified in Exhibit A to the Agreement.

"**Quarterly Payment Deadline**" means the day that is 45 days after the last day of any particular Contract Quarter.

"**Regulatory Approval**" means any and all approvals, licenses, registrations, or authorizations of any Regulatory Authority in a particular national jurisdiction that are necessary to market, Sell and use a Licensed Product or Licensed Service in that national jurisdiction.

"**Regulatory Authority**" means any country, federal, supranational, state, or local regulatory agency, department, bureau, or other government entity responsible for granting any necessary licenses or approvals for the marketing, Sale and use of a Licensed Product or Licensed Service in a particular national jurisdiction, including without limitation FDA, European Medicines Agency or Koseisho (i.e. the Japanese Ministry of Health and Welfare).

"**Sell**", "**Sale**" or "**Sold**" means any transfer or other disposition of Licensed Products or Licensed Services for which consideration is received by Licensee or Sublicensees. A Sale of Licensed Products or Licensed Services will be deemed completed at the time Licensee or its Sublicensee receives such consideration.

"**Sublicense Agreement**" means any agreement or arrangement pursuant to which Licensee (or Sublicensee) grants to any third party any of the license rights granted to the Licensee under the Agreement.

"**Sublicense Fee**" means the fee specified in Section 3.1(d).

"**Sublicensee**" means any entity to whom an express sublicense has been granted under the Patent Rights and/or Technology Rights. [***]

"**Technology Rights**" means Licensor's rights in technical information, know-how, processes, procedures, compositions, devices, methods, formulas, protocols, techniques, designs, drawings or data created before the Effective Date by Inventors at UT Southwestern and within the Field which are not covered by a Valid Claim but which are necessary or reasonably useful for practicing Patent Rights.

"**Territory**" means worldwide.

"Valid Claim" means a claim of (i) an issued and unexpired patent included within the Patent Rights unless the claim has been held unenforceable or invalid by the final, un-reversed, and un- appealable decision of a court or other government body of competent jurisdiction, has been irretrievably abandoned or disclaimed, or has otherwise been finally admitted or determined to be invalid, un-patentable or unenforceable, whether through reissue, reexamination, disclaimer or otherwise, or (ii) a pending patent application within the Patent Rights to the extent the claim continues to be prosecuted in good faith.

2. License Grant and Commercialization

2.1 Grant

(a) Licensor grants to Licensee a royalty-bearing exclusive license under the Patent Rights to develop, manufacture, have manufactured, distribute, have distributed, use, offer for Sale, Sell, lease, loan and/or import Licensed Products in the Field in the Territory and to perform Licensed Services in the Field in the Territory.

(b) Licensor grants to Licensee a royalty-bearing non-exclusive license under Technology Rights to develop, manufacture, have manufactured, distribute, have distributed, use, offer for Sale, Sell, lease, loan and/or import Licensed Products in the Field in the Territory and to perform Licensed Services in the Field in the Territory.

(c) This grant is subject to (i) the payment by Licensee to Licensor of all consideration required under the Agreement, (ii) any rights of, or obligations to, the Government as set forth in Section 11.2 (Government Rights), and (iii) rights retained by Licensor to:

(1) Publish the scientific findings from research related to the Patent Rights; and

(2) Use the Licensed Subject Matter for teaching, research, education, and other educationally-related, non-commercial purposes (the "Non- Commercial Purposes"); for the avoidance of doubt the Non-Commercial Purposes identified in this clause to not include clinical trials for Licensed Products, unless Licensor is otherwise engaged by Licensee, Affliate, or Sublicensee pursuant to the terms of a separate agreement to conduct such clinical trials, in which case use of the Licensed Subject Matter in connection with such clinical trials will be governed by the terms of such separate agreement.

(3) Grant rights to, and transfer material embodiments of, the Licensed Subject Matter to other academic institutions or non-profit research institutions for the purposes identified in clauses (1) and (2) above.

(d) [***]

(e) Licensor reserves all rights not expressly granted in the Agreement and disclaims the grant of any implied rights to Licensee.

2.2 Sublicensing

Licensee has the right to grant Sublicense Agreements under the Licensed Subject Matter consistent with the terms of the Agreement, subject to the following:

(a) A Sublicense Agreement shall not exceed the scope and rights granted to Licensee hereunder. Sublicensee must agree in writing to be bound by the applicable terms and conditions of the Agreement and shall indicate that Licensor is a third party beneficiary of the Sublicense Agreement. [***]

(b) Licensee shall deliver to Licensor a true, complete, and correct copy of each Sublicense Agreement granted by Licensee or Sublicensee, and any modification or termination thereof, within 30 days following the applicable execution, modification, or termination of such Sublicense Agreement. If the Sublicense Agreement is not in English, Licensee shall provide Licensor an accurate English translation in addition to a copy of the original agreement.

(c) Notwithstanding any such Sublicense Agreement, Licensee will remain primarily liable to Licensor for all of the Licensee's duties and obligations contained in the Agreement, [***]

2.3 Diligent Commercialization

Licensee by itself or through its Sublicensees will use diligent efforts to make one or more Licensed Products and/or Licensed Services (as applicable) commercially available in the Field within the Territory. Without limiting the foregoing, Licensee will:

(a) maintain a bona fide, funded, ongoing and active research, development, manufacturing, regulatory, marketing or sales program (all as commercially reasonable) to make one or more Licensed Products and/or Licensed Services commercially available to the public as soon as commercially practicable

(b) Intentionally Omitted.

(c) any time after 2 years from the Effective Date and within 90 days after receiving written notice from Licensor's written request, provide written evidence satisfactory to Licensor that Licensee or its Sublicensee(s) has:
(i)Sales in non-oncology Indication; or
(ii)an effective, ongoing and active research, development, manufacturing, marketing or sales program as appropriate, directed toward obtaining regulatory approval, and/or production and/or Sales of a Licensed Product in non-oncology Indication.

If the Licensee's obligations under this Section 2.3 are not fulfilled, Licensor may treat such failure as a breach in accordance with Section 7.3(b).

3. Compensation

In consideration of rights granted to Licensee, Licensee will pay Licensor the following fees and royalties. All fees and royalties are not refundable and are not creditable against other fees and royalties. Each payment will reference the Agreement number and will be sent to Licensor's payment and accounting contact in Section 18 (Notices).

3.1 Non-Royalty Payments due from Licensee

(a) [***]

(b) *Milestone Fees*. Following the achievement of any milestone event, Licensee will pay Licensor the corresponding Milestone Fee on or before the Quarterly Payment Deadline for the Contract Quarter in which the milestone event is achieved, as follows:

Milestone Events	**Milestone Fees**
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

[***]

(c) *License Upfront Fee*. [***]

(d) *Sublicense Fees*. Licensee will pay the following Non-Royalty Sublicense Fees on or before the Quarterly Payment Deadline for the Contract Quarter in which the applicable Non-Royalty Sublicensing Consideration is received by the Licensee:

Field of the Sublicense Agreement	Sublicense Fee
[***]	[***]
[***]	[***]

[***]

(e) *Assignment Fee*. [***]

3.2 Royalties

Licensee will pay Licensor the following running royalties for each Contract Year for Licensed Products and Licensed Services covered by a Valid Claim, payable on or before the Quarterly Payment Deadline for the last Contract Quarter of such Contract Year:

[***]	[***]	[***]
	[***]	[***]
[***]	[***]	[***]
	[***]	[***]

Payment of any such royalties shall be subject to the following:

(a) Licensee's obligation to pay royalties on Net Sales under this Section 3.2 shall continue, on a country-by-country basis, [***]

(b) [***]

(c) [***]

(d) [***]

[***]

(e) Upon expiration of the Royalty Term in a country, the licenses under Section 2.1 will become royalty-free, and fully-paid up in such country.

3.3 Royalty Stacking

(a) [***]

(b) [***]

3.4 Non-cash Consideration
[***]

4. Reports and Plans

The reports specified in this Section 4 will be sent to Licensor's payment and reporting contact identified in Section 18 (Notices). If Licensor reasonably requests to have information submitted in a particular format, Licensee will use reasonable efforts to comply with such request.

4.1 Quarterly Payment and Milestone Reports
[***]

(a) [***]

(b) [***]

(c) [***]

(d) [***]

(e) [***]

(f) [***]

(g) [***]

(h) [***]

(i) [***]

4.2 Biannual Progress Meeting and Annual Written Report
Until the First Commercial Sale, Licensee will meet with representatives of UT Southwestern (in person or by videoconference or teleconference, as agreed to by

the Parties) semi-annually to provide an update on the Licensee, including (i) Licensee's efforts and accomplishments during the half year to develop and, if applicable, commercialize Licensed Products, and (ii) Licensee's development and commercialization plans with respect to Licensed Products for the next half year. The update shall also cover such activities by Sublicensees. Within 30 days following the end of each Contract Year until the first Sale of a Licensed Product or Licensed Service, Licensee will deliver to Licensor a true and accurate signed written progress report, which shall contain the following information to the extent relevant to the activities under the Agreement:

(a) [***]

(b) [***]

(c) [***]

(d) [***]

4.3 Government and Economic Development Reporting

If Licensor requests, Licensee will provide information for Licensor's Government and economic development reporting purposes, including, to the extent such information is required to be disclosed under federal or state law, the following:

(a) [***]

(b) [***]

(c) [***]

(d) [***]

This information shall be treated as Licensee's Confidential Information; provided that Licensor is entitled to combine such information with similar information from other Licensor licensees and publicly report such combined aggregate information, without identifying Licensee's separate specific applicable numbers. If and when Licensee has more than 200 full-time employees, then no further economic development reports will be required from Licensee.

5. Payment, Records, and Audits

5.1 Payments

All amounts referred to in the Agreement are expressed in U.S. dollars without deductions for taxes, assessments, fees, or charges of any kind. Each payment will reference the Agreement number set forth at the beginning of the Agreement. All payments to Licensor will be made in U.S. dollars by check or wire transfer (Licensee to pay all wire transfer fees) payable to the payee identified in Section 18 and sent to the payment and reporting contact in Section 18 (Notices).

5.2 Sales Outside the U.S.
If any currency conversion shall be required in connection with the calculation of payments hereunder, such conversion shall be made using the rate used by Licensee for its financial reporting purposes in accordance with Generally Accepted Accounting Principles (or foreign equivalent) [***]

5.3 Late Payments
Amounts that are not paid when due will accrue a late charge [***]

5.4 Records
For a period of five years after the Contract Year to which the records pertain, Licensee agrees that it and its Sublicensees will each keep complete and accurate records of their Sales, Net Product Sales, Net Service Sales, Milestone Fees, and Non-Royalty Sublicensing Consideration in sufficient detail to enable such payments to be determined and audited.

5.5 Auditing
[***]

6. Patent Expenses and Prosecution

6.1 Patent Expenses
Subject to Section 3.1(a), except as described below in this Section 6.1, Licensee shall pay for all patent services expenses, if any, incurred by Licensor following the Effective Date of this Agreement, [***]

6.2 Direction of Prosecution
Licensor will confer with Licensee to develop a strategy for the prosecution and maintenance of Patent Rights. [***]

6.3 Ownership
All patent applications and patents will be in the name of Licensor (and any co-owner identified in Exhibit A) and owned by Licensor (and such co-owner, if any). [***]

6.4 Foreign Filings
In addition to the U.S., the Patent Rights shall, subject to applicable bar dates, be pursued in such foreign countries as Licensee so designates in writing to Licensor in sufficient time to reasonably enable the preparation of such additional filings, and in those foreign countries in which Licensor has filed applications prior to the Effective Date. [***]

6.5 Withdrawal from Paying Patent Costs
[***][***]

6.6 U.S. Patent and Trademark Office Entity Size Status
Licensee represents that as of the Effective Date the entity size status of Licensee in accordance with the regulations of the U.S. Patent and Trademark Office is as

set forth in Exhibit A. Licensee will inform Licensor in writing on a timely basis of any change in its U.S. Patent and Trademark Office entity size status.

7. Term and Termination

7.1 Term
Unless earlier terminated as provided herein, the term of the Agreement will commence on the Effective Date and continue until the last date of expiration or termination of the Patent Rights, or if Technology Rights are licensed and no Patent Rights are applicable, for a term of 20 years. [***]

7.2 Termination by Licensee
Licensee, at its option, may terminate the Agreement by providing Licensor written notice of intent to terminate, which such termination will be effective 90 days following receipt of such notice by Licensor.

7.3 Termination by Licensor
Licensor, at its option, may immediately terminate the Agreement, or any part of Licensed Subject Matter, or any part of the Field, or any part of the Territory, or the exclusive nature of the license grant, upon delivery of written notice to Licensee of Licensor's decision to terminate, if any of the following occur:

(a) Licensee becomes in arrears in any payments due under the Agreement, and Licensee fails to make the required payment within 30 days after delivery of written notice from Licensor; or

(b) Licensee is in breach of any material non-payment provision of the Agreement, and does not cure such breach within 60 days after delivery of written notice from Licensor.

(c) Licensor delivers notice to Licensee of three or more actual breaches of the Agreement in any 12-month period, even in the event that Licensee cures such breaches in the allowed period.

7.4 Other Conditions of Termination The Agreement will terminate:

(a) [***]

(b) [***]

7.5 Effect of Termination
If the Agreement is terminated for any reason:

(a) All rights and licenses of Sublicensees shall terminate upon termination of the Agreement; provided however, if the Sublicense Agreement is for all of the Field for all of the Territory, and the Sublicensee is not then in breach of the Sublicense Agreement and agrees in writing to assume all of the obligations of Licensee and provides Licensor with written notice

thereof within 30 days after notice of termination of the Agreement, then such Sublicense Agreement shall survive; and

(b) Licensee shall cease making, having made, distributing, having distributed, using, selling, offering to sell, leasing, loaning and importing any Licensed Products and performing Licensed Services by the effective date of termination; and

(c) Licensee shall tender payment of all accrued royalties and other payments due to Licensor as of the effective date of termination; and

(d) Intentionally Ommitted.

(e) Nothing in the Agreement will be construed to release either Party from any obligation that matured prior to the effective date of termination; and

(f) The provisions of Sections 8 (Confidentiality), 9 (Infringement and Litigation), 11 (Representations and Disclaimers), 12 (Limit of Liability), 13 (Indemnification), 14 (Insurance), 17 (Use of Name), 18 (Notices), and 19 (General Provisions) will survive any termination or expiration of the Agreement. In addition, the provisions of Sections 3 (Compensation), 4.1 (Quarterly Payment and Milestone Reports), 5 (Payment, Records and Audits), and 6.1 (Patent Expenses) shall survive with respect to all activities and payment obligations accruing prior to the termination or expiration of the Agreement.

8. Confidentiality

8.1 Definition

"**Confidential Information**" means, with respect to any Party, all confidential or proprietary information or material regarding or embodying such Party's technology, products, business information or objectives, that is disclosed by or on behalf of such Party (the "Disclosing Party") to the other Party (the "Receiving Party") in connection with the Agreement, but only to the extent that such information or material (i) if disclosed in tangible form, is marked "confidential" or otherwise designated in writing as "confidential" at the time of disclosure or within 30 days thereafter, (ii) if disclosed orally or in non- tangible form, is identified by the Disclosing Party as "confidential" at the time of disclosure and, within 30 days thereafter, the Disclosing Party provides a written summary of such information or material marked or otherwise designated in writing as "confidential", or (iii) is of the nature that it would be reasonable under the circumstances to be considered confidential or proprietary information or material of the Disclosing Party.

8.2 Protection and Marking

All Confidential Information of the Disclosing Party: (i) is to be held in strict confidence by the Receiving Party, (ii) is to be used by and under authority of the Receiving Party only as authorized in the Agreement, and (iii) shall not be

disclosed by the Receiving Party, its agents or employees to any third party without the prior written consent of the Disclosing Party or as authorized in the Agreement. Licensee has the right to use and disclose Confidential Information of Licensor reasonably in connection with the exercise of its rights and performance of its obligations under the Agreement, including without limitation disclosing such Confidential Information to Sublicensees, potential investors, acquirers, and others on a need to know basis, if such Confidential Information is provided under conditions which reasonably protect the confidentiality thereof. The Receiving Party has the right to disclose the Disclosing Party's Confidential Information to its agent and employees to the extent necessary for the Receiving Party to exercise its rights or perform its obligations under the Agreement, provided that each agent and employee receiving such Confidential Information is subject to appropriate confidentiality obligations substantially similar to those of this Section 8. Each Party's obligation of confidence hereunder includes, without limitation, using at least the same degree of care with the disclosing Party's Confidential Information as it uses to protect its own Confidential Information, but always at least a reasonable degree of care. The Receiving Party shall be solely liable for any disclosure or use of the Disclosing Party's Confidential Information in violation of this Agreement by any agents, employees, advisors, actual or potential Sublicensees, acquirers or investors of the Receiving Party.

8.3 Confidentiality of Terms of Agreement

Each Party agrees not to disclose to any third party the terms of the Agreement without the prior written consent of the other Party hereto, except each Party may disclose the terms of the Agreement: (a) to advisors, actual or potential Sublicensees, acquirers or investors on a need to know basis, in each case, under appropriate confidentiality obligations substantially similar to those of this Section 8; and (b) to the extent necessary, in the reasonable opinion of the Receiving Party's counsel, to comply with applicable laws, regulations and court orders (including, without limitation, The Texas Public Information Act, as may be amended from time to time, other open records laws, decisions and rulings, and securities laws, regulations and guidance). If the Agreement is not for all fields of use, then Licensor may disclose the Field to other potential third party licensees. Notwithstanding the foregoing, the existence of the Agreement shall not be considered Confidential Information.

8.4 Disclosure Required by Court Order or Law

If the Receiving Party is required to disclose Confidential Information of another Party hereto, or any terms of the Agreement, pursuant to the order or requirement of a court, administrative agency, or other governmental body or applicable law, the Receiving Party may disclose such Confidential Information or terms to the extent required, provided that the Receiving Party shall provide the Disclosing Party with reasonable advance notice thereof (unless prohibited by law) to enable the Disclosing Party to seek a protective order and otherwise seek to prevent such disclosure. To the extent that Confidential Information so disclosed does not become part of the public domain by virtue of such disclosure, it shall remain Confidential Information protected pursuant to Section 8.

8.5 Copies
Each Party agrees not to copy or record any of the Confidential Information of the other Party, except as reasonably necessary to exercise its rights or perform its obligations under the Agreement, and for archival and legal purposes.

8.6 Continuing Obligations
Subject to the exclusions listed in Section 8.7, the Parties' confidentiality obligations under the Agreement will survive termination of the Agreement and will continue for a period of five years thereafter.

8.7 Exclusions
Information shall not be considered Confidential Information of a Disclosing Party under the Agreement to the extent that the Receiving Party can establish by competent written proof that such information:

(a) Was in the public domain at the time of disclosure; or

(b) Later became part of the public domain through no act or omission of the Receiving Party, its employees, agents, successors or assigns in breach of the Agreement; or

(c) Was lawfully disclosed to the Receiving Party by a third party having the right to disclose it not under an obligation of confidentiality; or

(d) Was already known by the Receiving Party at the time of disclosure; or

(e) Was independently developed by the Receiving Party without use of the disclosing Party's Confidential Information.

8.8 Copyright Notice
The placement of a copyright notice on any Confidential Information will not be construed to mean that such information has been published and will not release the other Party from its obligation of confidentiality hereunder.

8.9 Remedies
In the event of a breach, threatened breach or intended breach of the terms of this Section 8 by either of the Parties, the Disclosing Party, in addition to any other rights and remedies available to it at law or in equity, shall be entitled to seek preliminary and final injunctions, enjoining and restraining such breach, threatened breach or intended breach of such Disclosing Party's Confidential Information.

9. Infringement and Litigation

9.1 Notification
If either Licensor's designated office for technology commercialization or Licensee becomes aware of any infringement or potential infringement of Patent Rights, each Party shall promptly notify the other of such in writing.

9.2 Licensee's Enforcement Rights
Licensee may enforce the Patent Rights against any infringement by a third party. [***]

9.3 Licensor's Enforcement Rights
If Licensee does not file suit within six months after a written request by Licensor to initiate an infringement action, then Licensor shall have the right, at its sole discretion, to bring suit to enforce any Patent Right licensed hereunder against the infringing activities, with Licensor retaining all recoveries from such enforcement. [***]

9.4 Cooperation between Licensor and Licensee
In any infringement suit or dispute, the Parties agree to cooperate fully with each other. [***]

[***]

10. Export Compliance

Licensee understands that the Arms Export Control Act (AECA), including its implementing International Traffic In Arms Regulations (ITAR), and the Export Administration Act (EAA), including its Export Administration Regulations (EAR), are some (but not all) of the laws and regulations that comprise the U.S. export laws and regulations. Licensee further understands that the U.S. export laws and regulations include (but are not limited to): (a) ITAR and EAR product/service/data- specific requirements; (b) ITAR and EAR ultimate destination-specific requirements; (c) ITAR and EAR end user-specific requirements; (d) Foreign Corrupt Practices Act; and (e) anti-boycott laws and regulations. Licensee will comply with all then-current applicable export laws and regulations of the U.S. Government (and other applicable U.S. laws and regulations) pertaining to the Licensed Products and Licensed Services (including any associated products, items, articles, computer software, media, services, technical data, and other information). Licensee certifies that it will not, directly or indirectly, export (including any deemed export), nor re-export (including any deemed re-export) the Licensed Products and Licensed Services (including any associated products, items, articles, computer software, media, services, technical data, and other information) in violation of applicable U.S. laws and regulations. Licensee will include a provision in its agreements, substantially similar to this Section 10, with its Sublicensees, third party wholesalers and distributors, and physicians, hospitals or other healthcare providers who purchase a Licensed Product, requiring that these parties comply with all then-current applicable U.S. export laws and regulations and other applicable U.S. laws and regulations.

11. Representations and Disclaimers

11.1 Licensor Representations
[***]

11.2 Government Rights
[***]

11.3 Licensor Disclaimers
EXCEPT AS SPECIFICALLY SET FORTH IN SECTION 11.1, LICENSEE UNDERSTANDS AND AGREES THAT LICENSOR MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, AS TO THE LICENSED PRODUCTS OR LICENSED SERVICES, OR AS TO THE OPERABILITY OR FITNESS FOR ANY USE OR PARTICULAR PURPOSE, MERCHANTABILITY, SAFETY, EFFICACY, APPROVABILITY BY REGULATORY AUTHORITIES, TIME AND COST OF DEVELOPMENT, PATENTABILITY, AND/OR BREADTH OF PATENT RIGHTS. [***]

11.4 Licensee Representations
By execution of the Agreement, Licensee represents, acknowledges, covenants and agrees

(a) that Licensee has not been induced in any way by Licensor or its employees to enter into the Agreement, and (b) that Licensee has been given an opportunity to conduct sufficient due diligence with respect to all items and issues pertaining to this Section 11 (Representations and Disclaimers) and all other matters pertaining to the Agreement; and

(b) that Licensee has adequate knowledge and expertise, or has utilized knowledgeable and expert consultants, to adequately conduct the due diligence, and (d) that Licensee accepts all risks inherent herein. Licensee represents that it is a duly organized, validly existing entity of the form indicated in the preamble to the Agreement, and is in good standing under the laws of its jurisdiction of organization as indicated in the preamble of the Agreement, and has all necessary corporate or other appropriate power and authority to execute, deliver and perform its obligations hereunder.

12. Limit of Liability

IN NO EVENT SHALL LICENSOR, THE UNIVERSITY SYSTEM IT GOVERNS, ITS MEMBER INSTITUTIONS, INVENTORS, REGENTS, OFFICERS, EMPLOYEES, STUDENTS, AGENTS OR AFFILIATED ENTERPRISES, BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, INCIDENTAL, EXEMPLARY, OR PUNITIVE DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS OR REVENUE) ARISING OUT OF OR IN CONNECTION WITH THE AGREEMENT OR ITS SUBJECT MATTER, REGARDLESS OF WHETHER ANY SUCH PARTY KNOWS OR SHOULD KNOW OF THE POSSIBILITY OF SUCH DAMAGES. [***]

13. Indemnification

13.1 Indemnification Obligation

Subject to Section 13.2, Licensee agrees to hold harmless, defend and indemnify Licensor, the university system it governs, its member institutions, its Regents, officers, employees, students and agents ("**Indemnified Parties**") from and against any liabilities, damages, causes of action, suits, judgments, liens, penalties, fines, losses, costs and expenses (including, without limitation, reasonable attorneys' fees and other expenses of litigation) (collectively "**Liabilities**") resulting from claims or demands brought by third parties against an Indemnified Party on account of any injury or death of persons, damage to property, or any other damage or loss arising out of or in connection with the Agreement or the exercise or practice by or under authority of Licensee or its Sublicensees, or third party wholesalers or distributors, or physicians, hospitals or other healthcare providers who purchase a Licensed Product, of the rights granted hereunder.

13.2 Conditions of Indemnification

[***]

14. Insurance

14.1 Insurance Requirements

Prior to any Licensed Product being used or Sold (including for the purpose of obtaining Regulatory Approval), and prior to any Licensed Service being performed by Licensee or by a Sublicensee, and for a period of five years after the Agreement expires or is terminated, Licensee shall, at its sole cost and expense, procure and maintain commercial general liability insurance in commercially reasonable and appropriate amounts for the Licensed Product being used or Sold or the Licensed Service being performed. [***]

14.2 Evidence of Insurance and Notice of Changes

[***]

15. Assignment

The Agreement may not be assigned by Licensee without the prior written consent of Licensor, which consent will not be unreasonably withheld. For clarity, an assignment shall not include any sublicensing by MAIA Biotechnology to a MAIA Affiliate. A merger or other transaction in which the equity holders of Licensee prior to such event hold less than a majority of the equity of the surviving or acquiring entity shall be considered an assignment of the Agreement. [***]

16. Governmental Markings

16.1 Patent Markings

Licensee agrees that all Licensed Products Sold by Licensee or Sublicensees will be legibly marked with the number of any applicable patent(s) licensed hereunder

as part of the Patent Rights in accordance with each country's patent marking laws, including Title 35, U.S. Code, or if such marking is not practicable, shall so mark the accompanying outer box or product insert for Licensed Products accordingly.

16.2 Governmental Approvals and Marketing of Licensed Products and or Licensed Services Licensee will be responsible for obtaining all necessary governmental approvals for the development, production, distribution, Sale, and use of any Licensed Product or performance of any Licensed Service, at Licensee's expense, including, without limitation, any safety studies. Licensee will have sole responsibility for any warning labels, packaging and instructions as to the use and the quality control for any Licensed Product or Licensed Service.

16.3 Foreign Registration and Laws
Licensee agrees to register the Agreement with any foreign governmental agency that requires such registration and Licensee will pay all costs and legal fees in connection with such registration. Licensee is responsible for compliance with all foreign laws affecting the Agreement or the Sale of Licensed Products and Licensed Services to the extent there is no conflict with United States law, in which case United States law will control.

17. Use of Name

Neither Party will use the name, trademarks or other marks of the other Party (including, in the case of Licensor, the name of the university system it governs, its member institutions, any of its Regents or employees) without the advance written consent of the other Party. Notwithstanding the foregoing, Licensor may use Licensee's name and logo for various reports required by governmental law, rule or regulation and for internal reports without the prior written consent of the Licensee.

18. Notices

Any notice or other communication of the Parties required or permitted to be given or made under the Agreement will be in writing and will be deemed effective when sent in a manner that provides confirmation or acknowledgement of delivery and received at the address set forth below (or as changed by written notice pursuant to this Section 18).

Licensee Contacts	Licensor Contacts
Contact for Notice: Vlad Vitoc, MD, MBA Chief Executive Officer MAIA Biotechnology, Inc. 444 West Lake Street, Suite 1700 Chicago, IL 60606 Office: [***] Cell: [***] Email: [***] Patent prosecution contact: [***]	Contact for Notice: UT Southwestern Medical Center Office for Technology Development Attn: Director for Technology Commercialization 5323 Harry Hines Boulevard, Dallas, Texas 75390-9094 Fax: [***] Phone: [***] E-mail: [***] Payment and financial reporting contact: Checks in U.S. dollars payable to "UT SOUTHWESTERN" referencing L2664-MAIA, UT Southwestern Medical Center Lock Box 845477 Dallas, Texas 75284-5477 Patent prosecution contact: Attn: Director for Technology Commercialization Office for Technology Development 5323 Harry Hines Boulevard, Dallas, Texas 75390-9094 Fax: [***] Phone: [***] E-mail: [***]

Notices required under the Agreement may be delivered [***] provided such notice is confirmed in writing as indicated. Notices shall be provided to each Party as specified in the "Contact for Notice" address. Each Party shall update the other Party in writing with any changes in such contact information.

19. General Provisions

19.1 Binding Effect
The Agreement is binding upon and inures to the benefit of the Parties hereto, their respective executors, administrators, heirs, permitted assigns, and permitted successors in interest.

19.2 Construction of Agreement
Headings are included for convenience only and will not be used to construe the Agreement. The Parties acknowledge and agree that both Parties substantially participated in negotiating the provisions of the Agreement; therefore, both Parties agree that any ambiguity in the Agreement shall not be construed more

favorably toward one Party than the other Party, regardless of which Party primarily drafted the Agreement.

19.3 Counterparts and Signatures

The Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which taken together shall constitute one and the same instrument. A Party may evidence its execution and delivery of the Agreement by transmission of a signed copy of the Agreement via facsimile or email. In such event, the Party shall promptly provide the original signature page(s) to the other Party.

19.4 Compliance with Laws

Licensee will comply with all applicable national, state and local laws and regulations, including, without limitation, all export laws and regulations.

19.5 Governing Law

The Agreement will be construed and enforced in accordance with laws of the U.S. and the State of Texas, without regard to choice of law and conflicts of law principles.

19.6 Modification

Any modification of the Agreement will be effective only if it is in writing and signed by duly authorized representatives of both Parties. No modification will be made by email communications.

19.7 Severability

If any provision hereof is held to be invalid, illegal or unenforceable in any jurisdiction, the Parties hereto shall negotiate in good faith a valid, legal and enforceable substitute provision that most nearly reflects the original intent of the Parties, and all other provisions hereof shall remain in full force and effect in such jurisdiction and shall be construed in order to carry out the intentions of the Parties hereto as nearly as may be possible. Such invalidity, illegality or unenforceability shall not affect the validity, legality or enforceability of such other provisions in any other jurisdiction, so long as the essential essence of the Agreement remains enforceable.

19.8 Third Party Beneficiaries

Nothing in the Agreement, express or implied, is intended to confer any benefits, rights or remedies on any entity, other than the Parties and their permitted successors and assigns.

19.9 Waiver

Neither Party will be deemed to have waived any of its rights under the Agreement unless the waiver is in writing and signed by such Party. No delay or omission of a Party in exercising or enforcing a right or remedy under the Agreement shall operate as a waiver thereof.

19.10 Sovereign Immunity
Nothing in the Agreement shall be deemed or treated as any waiver of Licensor's sovereign immunity.

19.11 Entire Agreement
The Agreement constitutes the entire Agreement between the Parties regarding the subject matter hereof, and supersedes all prior written or verbal agreements, representations and understandings relative to such matters.

19.12 Claims Against Licensor for Breach of Agreement
Licensee acknowledges that any claim for breach of the Agreement asserted by Licensee against Licensor shall be subject to Chapter 2260 of the Texas Government Code and that the process provided therein shall be Licensee's sole and exclusive process for seeking a remedy for any and all alleged breaches of the Agreement by Licensor or the State of Texas.

20. No Other Promises and Agreements; Representation by Counsel.

Licensee expressly warrants and represents and does hereby state and represent that no promise or agreement which is not herein expressed has been made to Licensee in executing the Agreement except those explicitly set forth herein, and that Licensee is not relying upon any statement or representation of Licensor or its representatives. Licensee is relying on Licensee's own judgment and has had the opportunity to be represented by legal counsel. Licensee hereby warrants and represents that Licensee understands and agrees to all terms and conditions set forth in the Agreement.

IN WITNESS WHEREOF, the Parties hereto have caused their duly authorized representatives to execute this Patent License Agreement.

LICENSOR: BOARD OF REGENTS OF THE UNIVERSITY OF TEXAS SYSTEM

By: _____
Claire Aldridge
Assistant Vice President, Commercialization and Business Development

Date: _____

Licensee: AMIA Biotechnology, Inc.

By: _____
Vlad Vitoc
Chief Executive Office

Date: _____

EXHIBIT A TO
PATENT LICENSE AGREEMENT

PATENT RIGHTS

App. No./ Date of Filing	**Title/ UTSW Ref. No.**	**Jointly Owned? (Y/N; if Y, with whom?)**	**Prosecution Counsel**
US Provisional Application 62/989,041 Filed: 3/13/2020	**SEQUENTIAL TREATMENT OF CANCERS USING 6- THIO-dG AND CHECKPOINT INHIBITORS** (UTSD: 3648)	□☒No	Parker Highlander, PLLC

Exhibit 10.4

Original Agreement:	December 1, 2019
Amended Agreement:	March 29, 2020
2nd Amended Agreement:	November 1, 2020
3rd Amended Agreement:	Effective date when $12M Qualified Funds Raised is Reached

Vlad Vitoc, MD, MBA
950 N Clark Street Unit K
Chicago, IL 60610

Re: Amended and Restated Executive Employment Agreement by MAIA Biotechnology, Inc.

Dear Vlad:

I am very pleased to confirm our offer to you of continued employment with MAIA Biotechnology, Inc. (the "Company"), in the position of **Chief Executive Officer and President**, effective as of the date the $12M qualified funds raised is reached. This supersedes previous Employment Agreements to date.

The terms of our offer and the benefits currently provided by the Company are as follows:

1. **Salary**. The Base Salary is $430,000 annualized (the "Base Salary"), payable in installments in accordance with the Company's regular payroll schedule.

In no circumstance will your salary be decreased during the term of your employment, except by mutual written agreement by you and the Company. In case the Company decides to prepare for an Initial Public Offering, the salary will be reviewed and adjusted to be commensurate with the significant workload increase in meeting pre and post-IPO relevant regulatory requirements.

2. **Cash Bonus**. You will be eligible for a discretionary annual bonus of up to 40% of Executive's Base Salary (the "Annual Bonus"), based on previous year performance. In determining whether to grant a bonus, in its discretion, the Board of Directors of the Company will take into account your performance and milestone achievements. Bonus payments are subject to approval and discretion of the Board of Directors of the Company. Performance objectives will be defined in alignment with the corporate goals. Target annual cash bonus is to be paid within 90 days of the subsequent year. Executive must remain an active employee through the end of any given calendar year in order to earn an Annual Bonus for that year.

3. **Performance Incentive Options**. You will be eligible for a discretionary annual Performance Incentive Options award beginning in 2021, based on previous year performance. In determining whether to grant an options bonus, in its discretion, the Board of Directors of the Company will take into account your performance and milestone achievements. Performance Incentive Options are subject to approval and discretion of the Board of Directors of the Company. Performance objectives will be defined in alignment with the corporate goals.

4. **Work Assignment and Location**. The Company may enter into loaned services or secondment agreements requiring that you provide similar services to Company subsidiaries or affiliates. Your job description and additional working conditions are set forth in Exhibit E.

5. **Benefits.** Subject to the Company having available funds, you and your dependents will be eligible to participate in regular health insurance and other employee benefit plans, as established by the Company. The Company does not accrue Paid Time Off. You may take personal or vacation time at your discretion subject to Company reasonable needs.

6. **Confidentiality**. As an executive employee of the Company, you will have access to certain confidential information of the Company and/or its affiliates and you may, during the course of your employment, develop certain information or inventions that will be the property of the Company and/or its affiliates. To protect the interests of the Company and its affiliates, you will need to sign the Company's "Employee Invention Assignment, Confidentiality, Non- Solicitation, and Non-Competition Agreement," (attached as Exhibit A) applying to the Company and its affiliates, as a condition of your employment. We wish to impress upon you that we do not want you to, and we hereby direct you not to, bring with you any confidential or proprietary material of any former employer, client or other person or to violate any other obligations you may have to any former employer, client or other person. During your employment with the Company and for one year thereafter, you agree that you will not engage, directly or indirectly, in any activity that is involving drugs for the treatment of cancer indication for which company owned assets are being actively developed by the Company. You will disclose to the Company in writing any such proposed employment, business or activity, and must receive written consent from the Compensation Committee of the MAIA Biotechnology Board of Directors. You will not assist any other person or organization in competing with the Company or its affiliates or in preparing to engage in competition with the business or proposed business of the Company or its affiliates.

7. **No Breach of Obligations to Prior Employers**. You represent that your signing of this offer letter, agreement(s) concerning stock options granted to you, if any, under the Plan (as defined below) and the Company's Employee Invention Assignment, Confidentiality and Non-Competition Agreement and your commencement of employment with the Company will not violate any agreement or duty that you have with any former employer, client or other person.

8. **Options**. As an executive of the Company, you may be provided stock option grants in the Company governed by the terms of the MAIA Biotechnology Stock Option Plan(s) and applicable agreements.

9. **At Will Employment**. While we look forward to a long and profitable relationship, should you decide to accept our offer, you will be an at-will employee of the Company, which means the employment relationship can be terminated by the Company or you for any reason, at any time, with or without prior notice (except as provided below) and with or without Cause, as defined below. Any statements or representations to the contrary (and, indeed, any statements contradicting any provision

in this letter) are ineffective. Further, your participation in any stock option or benefit program is not to be regarded as assuring you of continuing employment for any particular period of time. Any modification or change in your at will employment status may only occur by way of a written employment agreement signed by you and the Chief Executive Officer of the Company. For purposes of this Agreement, "*Cause*" means: (i) conviction of or plea of nolo contendere to a felony or a crime involving moral turpitude; (ii) engaging in an act of gross negligence or willful misconduct in the performance of your employment obligations and duties; (iii) committing an act of fraud against, or material misconduct or willful misappropriation of property belonging to the Company or its subsidiaries or affiliates; (iv) engaging in any other misconduct that has had or will have an adverse effect on the Company's or its subsidiaries or affiliates reputation or business; or (v) your material breach of the Employee Invention Assignment, Confidentiality and Non-Competition Agreement or other unauthorized misuse of the Company's or any of or its subsidiaries or other affiliates' trade secrets or proprietary information."

Notwithstanding the foregoing, in the event that the Company terminates the employment relationship without Cause, the Company shall owe you:

a) all accrued and unpaid Base Salary payable and accrued and unpaid deferred compensation earned as of the date of termination;

b) any Bonus or other such compensation earned and payable pursuant to any compensation program then in effect;

c) reimbursement, following submission by you to the Company of appropriate supporting documentation, for all incurred but unreimbursed reasonable and necessary business expenses for which you are entitled to reimbursement in accordance with the Company's written policies, as long as claims for such reimbursement (accompanied by supporting documentation) are submitted to the Company within 45 days following the date of your termination of employment;

d) the benefit of any options vested as of the termination date.

e) a severance payment equal to the Base Salary and benefits you otherwise would have received for the one year following your termination payable as salary continuation in accordance with the Company's normal payroll practices. This payment is consideration for the covenant not to compete in Exhibit A.

If you wish to terminate the employment relationship, we ask that you provide at least 14 calendar days' prior written notice to the Company.

10. **Authorization to Work**. Please note that because of employer regulations adopted in the Immigration Reform and Control Act of 1986, within three (3) business days of starting your new position you will need to present documentation demonstrating that you have authorization to work in the United States.

11. **Arbitration**. You and the Company agree to submit to mandatory binding arbitration any and all claims arising out of or related to your employment with the Company and the termination thereof, including, but not limited to, claims for unpaid wages, wrongful termination, torts, stock or stock options or other ownership interest in the Company, and/or discrimination (including harassment) based upon

any federal, state or local ordinance, statute, regulation or constitutional provision. The arbitrator shall issue a written decision that contains the essential findings and conclusions on which the decision is based. Arbitration shall be subject to the American Arbitration Association Employment Arbitration Rules and take place in Chicago, Illinois. Illinois law shall apply where state law is applicable. Venue for enforcement of any arbitration award shall be the state or federal courts in Chicago, Illinois. Each party may seek injunctive relief in court related to the improper use, disclosure, or misappropriation of a party's private, proprietary, confidential or trade secret information or violation of the non-competition provisions in Exhibit A. The venue for any Court suit will be a state or federal court sitting in Chicago, Illinois.

THE PARTIES HEREBY WAIVE ANY RIGHTS THEY MAY HAVE TO TRIAL BY JURY.

This Agreement does not restrict your right to file administrative claims you may bring before any government agency where, as a matter of law, the parties may not restrict the employee's ability to file such claims (including, but not limited to, the National Labor Relations Board, the Equal Employment Opportunity Commission and the Department of Labor).

However, the parties agree that, to the fullest extent permitted by law, arbitration shall be the exclusive remedy for the subject matter of such administrative claims.

12. **Background Check**. This offer is contingent upon a satisfactory employment background check. This offer can be rescinded in the Company's discretion based upon any information received in the verification.

13. **Entire Agreement**. This offer, once accepted, constitutes the entire agreement between you and the Company with respect to the subject matter hereof and supersedes all prior offers, negotiations and agreements, if any, whether written or oral, relating to such subject matter, except for agreement(s) concerning stock options granted to you and the Company's Employee Invention Assignment, Confidentiality and Non-Competition Agreement. You acknowledge that neither the Company nor its agents have made any promise, representation, or warranty whatsoever, either express or implied, written or oral, which is not contained in this agreement for the purpose of inducing you to execute the agreement, and you acknowledge that you have executed this agreement in reliance only upon such promises, representations and warranties as are contained herein.

14. **Acceptance**. This offer will remain open for two weeks after the effective date. If you decide to accept our offer, and I hope you will, please sign the enclosed copy of this letter in the space indicated and return it to me. Your signature will acknowledge that you have read and understood and agreed to the terms and conditions of this offer letter and the attached documents, if any. Should you have anything else that you wish to discuss, please do not hesitate to call me.

We look forward to the opportunity to welcome you to the Company.

Very truly yours,

/s/ Daniel Relovsky
Daniel Relovsky
Chief Operating Officer

I have read and understood this offer letter and hereby acknowledge, accept and agree to the terms as set forth above and further acknowledge that no other commitments were made to me as part of my employment offer except as specifically set forth herein.

/s/ Vlad Vitoc — Date signed. 8/2/2021
Vlad Vitoc, MD, MBA
Chief Executive Officer

EXHIBIT A

EMPLOYEE INVENTION ASSIGNMENT, CONFIDENTIALITY, NON-SOLICITATION, AND NON-COMPETE AGREEMENT

In consideration of my employment or continued employment by MAIA Biotechnology, Inc., a Delaware corporation (the "Company"), I hereby represent and agree as follows:

1. By virtue of my position, I understand that I will have and/or have had access to Confidential Information (as defined below) regarding the Company's customers, suppliers, business plans, software, intellectual property, processes and methods, development tools, scientific, technical and/or business innovations, and other information.

2. Definitions. The following definitions apply to this Agreement:

a. "Company Interest" means any business of the Company and its affiliates involving drugs for the treatment of cancer indication for which company owned assets are being actively developed by the Company.

b. "Intellectual Property Rights" means any and all intellectual property rights and other similar proprietary rights in any jurisdiction, whether registered or unregistered, and whether owned or held for use under license with any third party, including all rights and interests pertaining to or deriving from: (a) patents and patent applications, reexaminations, extensions and counterparts claiming property therefrom; inventions, invention disclosures, discoveries and improvements, whether or not patentable; (b) computer software and firmware, including data files, source code, object code and software-related specifications and documentation; (c) works of authorship, whether or not copyrightable; (d) trade secrets (including those trade secrets defined in the Uniform Trade Secrets Act and under corresponding statutory law and common law), business, technical and know-how information, non-public information, and confidential information and rights to limit the use of disclosure thereof by any person; (e) trademarks, trade names, service marks, certification marks, service names, brands, trade dress and logos and the goodwill associated therewith; (f) proprietary databases and data compilations and all documentation relating to the foregoing, including manuals, memoranda and record; (g) domain names; and (h) licenses of any of the foregoing; including in each case any registrations of, applications to register, and renewals and extensions of, any of the foregoing with or by any governmental authority in any jurisdiction.

c. "Invention" means any products, process, ideas, improvements, discoveries, inventions, designs, algorithms, financial models, writings, works of authorship, content, graphics, data, software, specifications, instructions, text, images, photographs, illustration, audio clips, trade secrets and other works, material and information, tangible or intangible, whether or not it may be patented, copyrighted or otherwise protected (including all versions, modifications, enhancements and derivative work thereof).

d. "Confidential Information" means confidential, secret or other non-public or proprietary information of or about the Company and its affiliates, their respective products, licensors, suppliers or customers and shall include, without limitation, information regarding: Inventions, methodologies, processes, tools, computer programs and documentation, manufacturing and application information, business strategies, financial information, forecasts, personnel information, customer lists or other customer information, trade secrets, new product developments, market information and advertising, business and marketing plans relating to the Company and its affiliates and any other non-public information, whether in writing or given to me orally, which I know or have reason to know the Company would like to treat as confidential for any purpose, such as maintaining a competitive advantage or avoiding undesirable publicity.

3. Assignment of Intellectual Property Rights. In consideration of my employment and/or continued employment, I agree to be bound by this Section 3.

a. General. I agree to assign, and hereby do assign, to the Company all of my rights in any Inventions (as defined above) (including all Intellectual Property Rights, as defined above) that are made, conceived or reduced to practice, in whole or in part and whether alone or with others, by me during my employment by, or service with, the Company or any of its affiliates or which arise out of any activity conducted by, for or under the direction of the Company or any of its affiliates (whether or not conducted at the Company's or any of its affiliates' facilities, working hours or using any of the Company's or its affiliates' assets), or which are useful with, or relate directly or indirectly to, any Company Interest (as defined above). I will promptly and fully disclose and provide all of the Inventions described above (the "Assigned Inventions") to the Company.

b. Assurances. I hereby agree during the duration of my employment by, or service with, the Company and thereafter to further assist the Company, at the Company's expense, to evidence, record and perfect the Company's rights in and ownership of the Assigned Inventions, to perfect, obtain, maintain, enforce and defend any rights specified to be so owned or assigned and to provide and execute all documentation necessary to effect the foregoing.

c. Other Inventions. I agree to not incorporate, or permit to be incorporated, any Invention conceived, created, developed or reduced to practice by me (alone or with others) prior to or independently of my employment by, or service with, the Company or its affiliates (collectively, "Prior Inventions") in any work I perform for the Company or its affiliates, without the Company's prior written consent. My Prior Inventions are listed in Exhibit B.

d. Moral Rights. To the extent allowed by applicable law, the terms of this Section 3 shall include all right of paternity, integrity, disclosure and withdrawal and any other rights that may be known as or referred to as moral right, artist's rights, droit moral or the like (collectively, "Moral Rights"). To the extent I retain any such Moral Rights under applicable law, I hereby ratify and consent to any action

that may be taken with respect to such Moral Rights by, or authorized by, the Company and agree not to assert any Moral Rights with respect thereto. I will confirm any such ratification, consent or agreement from time to time as requested by the Company.

4. Publicity. I consent to any and all uses and displays by the Company of my name, voice, likeness, image, appearance and biographical information in or in connection with any pictures, photographs, audio and video recordings, digital images, websites, television programs, and other advertising and/or printed and electronic forms and media ("Permitted Use"). I hereby release the Company from any and all claims, actions, damages, costs, and liability of any kind in connection with any Permitted Use.

5. Protection of Confidential Information of the Company. I understand that my work as an employee of the Company creates a relationship of trust and confidence between myself and the Company. During and after the period of my employment with the Company and its affiliates, I will not use or disclose or allow anyone else to use or disclose any Confidential Information except as may be necessary in the performance of my work for the Company and its affiliates or as may be authorized in advance by appropriate officers of the Company. Except as set forth herein, I will keep all Confidential Information secret and will not allow any unauthorized use of the same, whether or not any document containing it is marked as confidential. In addition, if I am requested or required (by oral questions, interrogatories, requests for information, subpoena, civil investigative demand, or similar process) to disclose any Confidential Information, it is agreed that I will provide the Company with prompt written notice of such request(s) so that the Company may seek an appropriate protective order. If, failing the entry of a protective order, I am, in the opinion of my counsel, compelled to disclose any Confidential Information under pain of liability for contempt or other censure or penalty, I may disclose only that portion of such Confidential Information as is legally required without liability hereunder; provided, that I agree to exercise my reasonable efforts to obtain assurance that confidential treatment will be accorded such Confidential Information. Upon termination of my employment with the Company and its affiliates, I will promptly deliver to the Company all documents and materials of any nature pertaining to my employment with the Company and I will not take with me any documents or materials or copies thereof containing any Confidential Information. Notwithstanding the foregoing, I am hereby notified that federal law provides for immunity from liability for the confidential disclosure of a trade secret as defined by federal law that is made (i) in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney if that disclosure is made solely for the purpose of reporting or investigating a suspected violation of law, or (ii) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

6. Non-Solicitation. I understand that my work as an employee of the Company creates a relationship of trust and confidence between myself and the Company. During my employment with the Company and its affiliates and for a period of one (1) year thereafter, I will not request or otherwise attempt to induce or influence, directly or indirectly, any present customer, licensor or supplier, or prospective customer, licensor or supplier, of the Company or other persons sharing a business relationship with the Company to cancel, to limit, divert, reduce or postpone their business with the Company, or otherwise take any action which might be to the disadvantage of the Company. During my employment with the Company and for a period of one (1) year thereafter, I will not hire or solicit for employment, directly or indirectly, or induce or actively attempt to influence, any agent, consultant or Employee of the Company or any Affiliate of the Company, as such capitalized terms are defined in the

Securities Act of 1933, as amended, to terminate his or her employment or discontinue such person's consultant, contractor or other business association with the Company.

7. Non-Compete. During my employment with the Company and its affiliates and for a period of one (1) year thereafter, I will not directly or indirectly, for myself, or on behalf of any other person, firm, corporation or other entity (except the Company or any of its affiliates), whether as principal, agent, debtor, executive, consultant, joint venturer, investor, employee, stockholder, partner, officer, member, manager, director, sole proprietor or in any other capacity, engage in, manage, own, operate, control, participate in the ownership, management, operation or control of or assist in any person or entity, whose business activities involve (i) drugs for the treatment of cancer indications for which Company owned assets are being actively developed by the Company. This provision may be modified or waived by written consent of the Compensation Committee of the MAIA Biotechnology, Inc. Board of Directors.

8. Mutual Non-Disparagement. I agree that I will not make, publish, or communicate to any person or entity in any public form any defamatory or disparaging remarks, comments, or statements concerning the Company or its business, employees, customers or affiliates. I understand this provision is not meant to restrict my rights under Section 7 of the National Labor Relations Act. Company agrees that it will not make, publish, or communicate to any person or entity in any public form any defamatory or disparaging remarks, comments, or statements concerning you.

9. Other Agreements. I represent that my performance of all the terms of this Agreement and my duties as an employee of the Company will not breach any invention assignment agreement, confidential information agreement, non-competition agreement or other agreement with any former employer or any other party. I represent that I have not and will not bring with me to the Company or use in the performance of my duties for the Company or its affiliates any documents or materials of a former employer that are not generally available to the public.

10. Disclosure of this Agreement. I do not hereby authorize the Company to notify others, including but not limited to customers of the Company and any of my future employers, of the terms of this Agreement and my responsibilities hereunder.

11. Injunctive Relief. I understand that in the event of a breach or threatened breach of this Agreement by me, the Company may suffer irreparable harm and monetary damages alone would not adequately compensate the Company. The Company will therefore be entitled to injunctive relief to enforce this Agreement in addition to any other remedies which the Company may be entitled to at law or hereunder, and such relief may be granted without the necessity of the Company showing any actual damage or irreparable harm, proving the inadequacy of its legal remedies, or posting any bond or other security proving actual monetary damages. I agree that if there is a question as to the enforceability of any of the provisions of this Agreement, I will not engage in any conduct inconsistent with or contrary to this Agreement until after the question has been resolved by a final judgment of a court of competent jurisdiction. In addition, while the duration of my covenants described in Sections 5, 6 and 7 above will be determined generally in accordance with the terms of those respective Sections, if I violate any of those covenants, I agree to extend it on the same terms and conditions for an additional period of time equal to the time that elapses from my violation to the later of (i) when the violation stops or (ii) the final resolution of any litigation stemming from such violation. In addition, in the event of any such breach, or any attempted or threatened breach, Employee agrees that the Company shall be entitled to recovery of the legal costs incurred, including reasonable attorney's fees, in any such action or suit. Nothing herein

contained shall be construed to prevent the Company from obtaining any other remedy or combination of remedies as the Company may elect to invoke. The failure of the Company to promptly institute legal action upon any breach of this Agreement will not constitute a waiver of that or any other breach of this Agreement. The venue for any Court suit will be a state or federal court sitting in Chicago, Illinois.

12. Enforcement and Severability. I acknowledge that each of the provisions in this Agreement are separate and independent covenants. I agree that if any court shall determine that any provision of this Agreement is unenforceable with respect to its term or scope such provision shall nonetheless be enforceable by any such court upon such modified term or scope as may be determined by such court to be reasonable and enforceable. The remainder of this Agreement shall not be affected by the unenforceability or court ordered modification of a specific provision.

13. At-Will Employment. I understand and agree that this Agreement does not constitute or create a contract of employment, whether express or implied, between the Company and me. I am at all times an at-will employee of the Company, which means that either the Company or I may terminate the employment relationship at any time, with or without prior notice and with or without cause. Nothing in this Agreement promises employment for any specific duration or period of time. I acknowledge that the obligations of this Agreement survive the separation of my employment (regardless of which party initiated it), to the extent permitted by governing law.

14. Governing Law; Venue. The laws of the State of Illinois shall govern the interpretation, validity and performance of the terms of this Agreement, regardless of the law that might be applied under principles of conflicts of law. Any dispute arising under or with respect to this Agreement shall be brought and heard exclusively in mandatory binding arbitration pursuant to paragraph 11 of the Employment Agreement.

15. Superseding Agreement. I understand and agree that this Agreement contains the entire agreement of the parties with respect to subject matter hereof and supersedes all previous agreements and understandings between the parties with respect to its subject matter.

16. Acknowledgments. I acknowledge that I have read this agreement, was given the opportunity to ask questions and sufficient time to consult an attorney and I have either consulted an attorney or affirmatively decided not to consult an attorney. I understand that my obligations under this Agreement survive the termination of my employment with the Company.

I UNDERSTAND THAT I AM AN EMPLOYEE-AT-WILL WITH THE COMPANY, MEANING THAT EITHER I AM OR THE COMPANY IS COMPLETELY FREE TO TERMINATE OUR EMPLOYMENT RELATIONSHIP AT ANY TIME AND FOR ANY REASON OR FOR NO REASON, WITHOUT INCURRING ANY OBLIGATIONS OR LIABILITIES OF ANY KIND WHATSOEVER OTHER THAN AS MAY BE SET FORTH IN A SIGNED WRITING BETWEEN THE COMPANY AND ME. I FURTHER ACKNOWLEDGE THAT I HAVE HAD A FULL OPPORTUNITY TO REVIEW THIS AGREEMENT AND CONSULT WITH COUNSEL OF MY CHOICE IF I SO CHOOSE REGARDING ITS TERMS, AND THAT I AM FREELY ENTERING THIS AGREEMENT WITH A FULL UNDERSTANDING OF ITS EFFECTS. I FURTHER UNDERSTAND THAT THIS AGREEMENT SUPERSEDES ANY AND ALL PRIOR OR CONTEMPORANEOUS REPRESENTATIONS OR AGREEMENTS, WHETHER ORAL, WRITTEN, OR IMPLIED, AND MAY NOT BE MODIFIED IN ANY WAY EXCEPT BY A SIGNED WRITING WHICH SPECIFICALLY REFERS TO THIS AGREEMENT AND IS SIGNED BY AN OFFICER OR OTHER DULY AUTHORIZED REPRESENTATIVE OF THE COMPANY.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written below.

/s/ Vlad Vitoc

Name of Employee:	Vlad Vitoc, MD, MBA
Title:	Chief Executive Officer & President
Address:	950 N Clark Street, Unit K Chicago, IL 60610

/s/ Dan Relovsky

	MAIA Biotechnology, Inc.
By:	Daniel Relovsky
Title:	Chief Operating Officer

EXHIBIT B

PRIOR INVENTIONS:

- None specified

EXHIBIT C

OPTION EXERCISE FORM

MAIA Biotechnology, Inc.
Attention: Chief Executive Officer

Dear Sir or Madam:

In accordance with and subject to the terms and conditions of the applicable stock option plan, I hereby elect to exercise my option granted under the Stock Option Award Agreement dated _____, to purchase (_____) shares, par value $0.0001 per share, of common stock of MAIA Biotechnology, Inc. (the "Company").

Enclosed herewith is payment to the Company in the amount of _____ U.S. Dollars ($_____) in full payment of the option price for said shares.

I hereby represent and warrant that I am acquiring the shares purchased hereunder for investment and not with a view to the sale or distribution thereof. I understand that such shares have not been registered under the Securities Act of 1933, as amended (the "Act"), by reason of their issuance in a transaction exempt from the registration requirement of the Act pursuant to Section 4(2) thereof and that the shares may not be resold or otherwise transferred except pursuant to a registration statement which has become effective under the Act unless the Company determines that such resale or other transfer may be effected without registration under the Act by virtue of an exemption therefrom.

I understand that the shares acquired through the exercise of my option granted under the Stock Option Award Agreement referenced above may be subject to rights of first refusals, restrictions on transfer and other restrictions set forth in the Company's certificate of incorporation, by-laws, and other pertinent stockholders' agreements that may be in place from time to time. If requested by the Company, I agree to read, execute and deliver counterpart signature pages to any stockholders' agreements that may be required to be entered into by me in connection with the exercise of my option hereby.

Sincerely yours,

Dated: _____ _____

Name: _____

EXHIBIT D:

MAIA Biotechnology, Inc.

Chief Executive Officer
Job Description

Job Summary

The Chief Executive Officer will direct the company in keeping with the vision outlined by the Board of Directors and partner with high-level officers to grow the company, strengthen it and ensure its sustainability.

Duties and Responsibilities:

Primary activities include, but are not limited to:

- Plans, develops, and establishes policies and objectives of business organization in accordance with Board directives.
- Primary responsibilities include: selecting and coaching the management team, managing the Board of Directors, establishing company strategy and objectives, and capitalizing the company.
- Communicating, on behalf of the company, with shareholders, government entities, and the public
- Represent the company as required, including attendance of important functions, industry events and public meetings.
- Create a business plan and investor presentations. Lead investor outreach. Lead acquisition and growth activities to support overall business objectives and plans.
- Define and lead the company's Financing strategy.
- Direct company operations to meet budget and other financial goals by facilitating company management to plan business objectives, to develop organizational policies, to coordinate functions and operations between departments, and to establish responsibilities and procedures for attaining objectives.
- Establish company performance objectives, allocate resources, and assess policies for senior management. Reviews activity reports and financial statements to determine progress and status in attaining objectives and revises objectives and plans in accordance with current conditions.
- Represent the company at Investors meetings. Lead capital market development, including participation in road shows, bank meetings, analyst meetings, and more.
- Review company operational procedures, policies, and standards
- Review activity reports and financial statements to determine progress and status in attaining objectives and revise objectives and plans in accordance with current conditions
- Demonstrate successful execution of business strategies for company products and services.
- Serve as key ambassador and the face of the company to medical professionals and societies, industry trade representatives, and key stakeholders.
- Substantial P&L responsibility with full top line authority and bottom-line accountability.

- Present company report at Annual Stockholder and Board of Director meetings.
- Evaluate achievements of the objectives of the company and contributions in attaining objectives.
- Perform due diligence and analysis of all Product Development programs and achievements.
- Evaluate performance of executives for compliance with established policies and objectives of firm and contributions in attaining objectives.

Education and Experience

- Education: Advanced degree in life sciences, Advanced degree in life sciences, business administration or a related field.
- Experience: At least 6 years of experience in an executive role in a biotech, pharmaceutical or medical device industry.
- Ability to identify and secure funding/revenue sources.
- Knowledge of public relations principles and practices. Knowledge of communication and public relation techniques Ability to develop and deliver presentations.
- Demonstrate a high energy, goal-oriented approach to succeed in a business environment.
- Consistently exhibit through actions, decisions and interactions (internally and externally), the highest standards of ethics and integrity.
- Travel estimated at 50%.

Skills

- Excellent verbal and written communication
- Leadership
- Critical thinking
- Complex problem solving
- Judgment and decision making
- Coordination
- Time management
- Management of personnel resources
- Management of financial resources

/s/ Vlad Vitoc 8/2/2021
CEO

/s/ Dan Relovsky 8/2/2021
COO

Exhibit 10.5

August 10, 2021

Joseph F McGuire
4929 Skyway Drive, Apt 2119
Jacksonville, FL 32246

Re: Employment by MAIA Biotechnology, Inc.

Dear Joe:

I am very pleased to confirm our offer to you of employment with MAIA Biotechnology, Inc. (the "Company"), in the position of **Chief Financial Officer**, effective as of August 16, 2021.

The terms of our offer and the benefits currently provided by the Company are as follows:

1. **Salary**. The Base Salary is $300,000 annualized (the "Base Salary"), payable in installments in in accordance with the Company's regular payroll schedule. In no circumstance will your salary be decreased during the term of your employment, except by mutual written agreement by you and the Company. In case the Company decides to prepare for an Initial Public Offering, the salary will be reviewed and adjusted to be commensurate with the significant workload increase in meeting pre and post-IPO relevant regulatory requirements.

2. **Sign-On Options**. As an executive of the Company, you have been provided stock option grants in the Company governed by the terms of the MAIA Biotechnology Stock Option Plan(s) and applicable agreements will grant 130,000 Stock Options. The Option will be subject to vesting over a four (4) year period according to the following schedule: 25% of the shares will vest as of the one-year anniversary of the vesting commencement date and 1/48th of the shares will vest monthly thereafter, so long as Executive remains in continuous service with the Company through the applicable vesting dates.

3. **Cash Bonus**. You will be eligible for a discretionary annual bonus of up to 35% of Executive's Base Salary (the "Annual Bonus"), based on previous year performance. In determining whether to grant a bonus, in its discretion, the Board of Directors of the Company will take into account your performance and milestone achievements. Bonus payments are subject to approval and discretion of the Board of Directors of the Company. Performance objectives will be defined in alignment with the corporate goals. Target annual cash bonus is 35% of Base Salary to be paid within 90 days of the subsequent year. Executive must remain an active employee through the end of any given calendar year in order to earn an Annual Bonus for that year.

4. **Performance Incentive Options**. You will be eligible for a discretionary annual Performance Incentive Options award beginning in 2022, based on previous year performance.

In determining whether to grant an options bonus, in its discretion, the Board of Directors of the Company will take into account your performance and milestone achievements. Performance Incentive Options are subject to approval and discretion of the Board of Directors of the Company. Performance objectives will be defined in alignment with the corporate goals.

5. **Work Assignment and Location**. The Company may enter into loaned services or secondment agreements requiring that you provide similar services to Company subsidiaries or affiliates. Your job description and additional working conditions are set forth in Exhibit D.

6. **Benefits.** Subject to the Company having available funds, you and your dependents will be eligible to participate in regular health insurance and other employee benefit plans, as established by the Company. The Company does not accrue Paid Time Off. You may take personal or vacation time at your discretion subject to Company reasonable needs.

7. **Confidentiality**. As an executive employee of the Company, you will have access to certain confidential information of the Company and/or its affiliates and you may, during the course of your employment, develop certain information or inventions that will be the property of the Company and/or its affiliates. To protect the interests of the Company and its affiliates, you will need to sign the Company's "Employee Invention Assignment, Confidentiality, Non- Solicitation, and Non-Competition Agreement," (attached as Exhibit A) applying to the Company and its affiliates, as a condition of your employment. We wish to impress upon you that we do not want you to, and we hereby direct you not to, bring with you any confidential or proprietary material of any former employer, client or other person or to violate any other obligations you may have to any former employer, client or other person.

8. **No Breach of Obligations to Prior Employers**. You represent that your signing of this offer letter, agreement(s) concerning stock options granted to you, if any, under the Plan (as defined below) and the Company's Employee Invention Assignment, Confidentiality and Non- Competition Agreement and your commencement of employment with the Company will not violate any agreement or duty that you have with any former employer, client or other person.

9. **Options**. As an executive of the Company, you may be provided stock option grants in the Company governed by the terms of the MAIA Biotechnology Stock Option Plan(s) and applicable agreements.

10. **At Will Employment**. While we look forward to a long and profitable relationship, should you decide to accept our offer, you will be an at-will employee of the Company, which means the employment relationship can be terminated by the Company or you for any reason, at any time, with or without prior notice (except as provided below) and with or without Cause, as defined below. Any statements or representations to the contrary (and, indeed, any statements contradicting any provision in this letter) are ineffective. Further, your participation in any stock option or benefit program is not to be regarded as assuring you of continuing employment for any particular period of time. Any modification or change in your at will employment status may only occur by way of a written employment agreement signed by you

and the Chief Executive Officer of the Company. For purposes of this Agreement, "*Cause*" means; (i) conviction of or plea of nolo contendere to a felony or a crime involving moral turpitude; (ii) engaging in an act of gross negligence or willful misconduct in the performance of your employment obligations and duties, (iii) committing an act of fraud against, or material misconduct or willful misappropriation of property belonging to the Company or its subsidiaries or affiliates; (iv) engaging in any other misconduct that has had or will have an adverse effect on the Company's or its subsidiaries or affiliates reputation or business; or (v) your material breach of the Employee Invention Assignment, Confidentiality and Non-Competition Agreement or other unauthorized misuse of the Company's or any of or its subsidiaries or other affiliates' trade secrets or proprietary information."

Notwithstanding the foregoing, in the event that the Company terminates the employment relationship without Cause, the Company shall owe you the following Severance

Benefits:

a) all accrued and unpaid Base Salary payable and accrued and unpaid deferred compensation earned as of the date of termination;

b) any Bonus or other such compensation earned and payable pursuant to any compensation program then in effect. The Company shall pay you an amount equal to a pro-rata portion of the Annual Bonus for the year in which such employment termination occurs, based on the number of days that elapsed in the year between the first day of the year and the date of your employment termination compared to 365 (the "**Prorated Annual Bonus**"). The Prorated Annual Bonus will be paid in a lump sum, subject to standard payroll deductions and withholdings, at the time such Annual Bonus payments are paid to similarly situated Company employees.

c) reimbursement, following submission by you to the Company of appropriate supporting documentation, for all incurred but unreimbursed reasonable and necessary business expenses for which you are entitled to reimbursement in accordance with the Company's written policies, as long as claims for such reimbursement (accompanied by supporting documentation) are submitted to the Company within 45 days following the date of your termination of employment;

d) the benefit of any options vested as of the termination date.

e) a severance payment equal to the Base Salary and benefits you otherwise would have received for the one year following your termination payable as salary continuation in accordance with the Company's normal payroll practices. This payment is consideration for the covenant not to compete in Exhibit A.

f) The receipt of the Severance Benefits will be subject to you signing and not revoking a separation agreement and general release of claims in a form reasonably satisfactory to the Company (the "**Separation Agreement**") by no later than the sixtieth (60th) day after your employment termination date ("**Release Deadline**").No Severance Benefits will be paid or provided until the Separation Agreement becomes effective. You shall also resign from all positions and terminate any relationships as an employee, advisor, officer or director with the Company and any of its affiliates, each effective on your employment termination date.

If you wish to terminate the employment relationship, we ask that you provide at least 14 calendar days' prior written notice to the Company.

11. **Authorization to Work**. Please note that because of employer regulations adopted in the Immigration Reform and Control Act of 1986, within three (3) business days of starting your new position you will need to present documentation demonstrating that you have authorization to work in the United States.

12. **Arbitration**. You and the Company agree to submit to mandatory binding arbitration any and all claims arising out of or related to your employment with the Company and the termination thereof, including, but not limited to, claims for unpaid wages, wrongful termination, torts, stock or stock options or other ownership interest in the Company, and/or discrimination (including harassment) based upon any federal, state or local ordinance, statute, regulation or constitutional provision, The arbitrator shall issue a written decision that contains the essential findings and conclusions on which the decision is based. Arbitration shall be subject to the American Arbitration Association Employment Arbitration Rules and take place in Chicago, Illinois. Illinois law shall apply where state law is applicable. Venue for enforcement of any arbitration award shall be the state or federal courts in Chicago, Illinois. Each party may seek injunctive relief in court related to the improper use, disclosure or misappropriation of a party's private, proprietary, confidential or trade secret information or violation of the non-competition provisions in Exhibit A. The venue for any Court suit will be a state or federal court sitting in Chicago, Illinois.

THE PARTIES HEREBY WAIVE ANY RIGHTS THEY MAY HAVE TO TRIAL BY JURY.

This Agreement does not restrict your right to file administrative claims you may bring before any government agency where, as a matter of law, the parties may not restrict the employee's ability to file such claims (including, but not limited to, the National Labor Relations Board, the Equal Employment Opportunity Commission and the Department of Labor).

However, the parties agree that, to the fullest extent permitted by law, arbitration shall be the exclusive remedy for the subject matter of such administrative claims.

13. **Conflicts of Interest.** You will be expected to devote your full-time business efforts to the business and affairs of the Company. Notwithstanding the foregoing, you may participate in outside charitable, civic, educational, professional, community or industry activities to the extent such activities do not individually or in the aggregate materially interfere with the performance of your duties to the Company as provided in this letter agreement or create an actual or potential conflict of interest with the Company's business.

14. **Background Check**. This offer is contingent upon a satisfactory employment background check. This offer can be rescinded in the Company's discretion based upon any information received in the verification.

15. **Entire Agreement**. This offer, once accepted, constitutes the entire agreement between you and the Company with respect to the subject matter hereof and supersedes all prior offers, negotiations and agreements, if any, whether written or oral, relating to such subject matter, except for agreement(s) concerning stock options granted to you and the Company's Employee Invention Assignment, Confidentiality and Non-Competition Agreement. You acknowledge that neither the Company nor its agents have made any promise, representation or warranty whatsoever, either express or implied, written or oral, which is not contained in this agreement for the purpose of inducing you to execute the agreement, and you acknowledge that you have executed this agreement in reliance only upon such promises, representations and warranties as are contained herein.

16. **Acceptance**. This offer will remain open until August 14, 2021. If you decide to accept our offer, and I hope you will, please sign the enclosed copy of this letter in the space indicated and return it to me. Your signature will acknowledge that you have read and understood and agreed to the terms and conditions of this offer letter and the attached documents, if any. Should you have anything else that you wish to discuss, please do not hesitate to call me.

We look forward to the opportunity to welcome you to the Company.

Very truly yours,

/s/ Vlad Vitoc
Vlad Vitoc, MD, MBA
Chief Executive Officer

I have read and understood this offer letter and hereby acknowledge, accept and agree to the terms as set forth above and further acknowledge that no other commitments were made to me as part of my employment offer except as specifically set forth herein.

/s/ Joseph McGuire Date signed: 8/10/2021

Joseph F. McGuire

EXHIBIT A

EMPLOYEE INVENTION ASSIGNMENT, CONFIDENTIALITY, NON-SOLICITATION, AND NON-COMPETE AGREEMENT

In consideration of my employment or continued employment by MAIA Biotechnology, Inc., a Delaware corporation (the "Company"), I hereby represent and agree as follows:

1. By virtue of my position, I understand that I will have and/or have had access to Confidential Information (as defined below) regarding the Company's customers, suppliers, business plans, software, intellectual property, processes and methods, development tools, scientific, technical and/or business innovations, and other information.

2. Definitions. The following definitions apply to this Agreement:

   a. "Company Interest" means any business of the Company and its affiliates involving drugs for the treatment of cancer indication for which company owned assets are being actively developed by the Company.

   b. "Intellectual Property Rights" means any and all intellectual property rights and other similar proprietary rights in any jurisdiction, whether registered or unregistered, and whether owned or held for use under license with any third party, including all rights and interests pertaining to or deriving from: (a) patents and patent applications, reexaminations, extensions and counterparts claiming property therefrom; inventions, invention disclosures, discoveries and improvements, whether or not patentable; (b) computer software and firmware, including data files, source code, object code and software-related specifications and documentation; (c) works of authorship, whether or not copyrightable; (d) trade secrets (including those trade secrets defined in the Uniform Trade Secrets Act and under corresponding statutory law and common law), business, technical and know-how information, non-public information, and confidential information and rights to limit the use of disclosure thereof by any person; (e) trademarks, trade names, service marks, certification marks, service names, brands, trade dress and logos and the goodwill associated therewith; (f) proprietary databases and data compilations and all documentation relating to the foregoing, including manuals, memoranda and record; (g) domain names; and (h) licenses of any of the foregoing; including in each case any registrations of, applications to register, and renewals and extensions of, any of the foregoing with or by any governmental authority in any jurisdiction.

c. "Invention" means any products, process, ideas, improvements, discoveries, inventions, designs, algorithms, financial models, writings, works of authorship, content, graphics, data, software, specifications, instructions, text, images, photographs, illustration, audio clips, trade secrets and other works, material and information, tangible or intangible, whether or not it may be patented, copyrighted or otherwise protected (including all versions, modifications, enhancements and derivative work thereof). If I work in California, this definition does not apply to an invention which qualifies under the provisions of California Labor Code Section 2870, a copy of which is attached hereto as Schedule B and is incorporated herein by reference.

d. "Confidential Information" means confidential, secret or other non-public or proprietary information of or about the Company and its affiliates, their respective products, licensors, suppliers or customers and shall include, without limitation, information regarding: Inventions, methodologies, processes, tools, computer programs and documentation, manufacturing and application information, business strategies, financial information, forecasts, personnel information, customer lists or other customer information, trade secrets, new product developments, market information and advertising, business and marketing plans relating to the Company and its affiliates and any other non-public information, whether in writing or given to me orally, which I know or have reason to know the Company would like to treat as confidential for any purpose, such as maintaining a competitive advantage or avoiding undesirable publicity.

3. Assignment of Intellectual Property Rights. In consideration of my employment and/or continued employment, I agree to be bound by this Section 3.

a. General. I agree to assign, and hereby do assign, to the Company all of my rights in any Inventions (as defined above) (including all Intellectual Property Rights, as defined above) that are made, conceived or reduced to practice, in whole or in part and whether alone or with others, by me during my employment by, or service with, the Company or any of its affiliates or which arise out of any activity conducted by, for or under the direction of the Company or any of its affiliates (whether or not conducted at the Company's or any of its affiliates' facilities, working hours or using any of the Company's or its affiliates' assets), or which are useful with, or relate directly or indirectly to, any Company Interest (as defined above). Iwill promptly and fully disclose and provide all of the Inventions described above (the "Assigned Inventions") to the Company.

b. Assurances. I hereby agree during the duration of my employment by, or service with, the Company and thereafter to further assist the Company,

at the Company's expense, to evidence, record and perfect the Company's rights in and ownership of the Assigned Inventions, to perfect, obtain, maintain, enforce and defend any rights specified to be so owned or assigned and to provide and execute all documentation necessary to effect the foregoing.

c. Other Inventions. I agree to not incorporate, or permit to be incorporated, any Invention conceived, created, developed or reduced to practice by me (alone or with others) prior to or independently of my employment by, or service with, the Company or its affiliates (collectively, "Prior Inventions") in any work I perform for the Company or its affiliates, without the Company's prior written consent. My Prior Inventions are listed in Schedule B.

d. Moral Rights. To the extent allowed by applicable law, the terms of this Section 3 shall include all right of paternity, integrity, disclosure and withdrawal and any other rights that may be known as or referred to as moral right, artist's rights, droit moral or the like (collectively, "Moral Rights"). To the extent I retain any such Moral Rights under applicable law, I hereby ratify and consent to any action that may be taken with respect to such Moral Rights by, or authorized by, the Company and agree not to assert any Moral Rights with respect thereto. I will confirm any such ratification, consent or agreement from time to time as requested by the Company.

4. Publicity. I consent to any and all uses and displays by the Company of my name, voice, likeness, image, appearance and biographical information in or in connection with any pictures, photographs, audio and video recordings, digital images, websites, television programs, and other advertising and/or printed and electronic forms and media ("Permitted Use"). I hereby release the Company from any and all claims, actions, damages, costs, and liability of any kind in connection with any Permitted Use.

5. Protection of Confidential Information of the Company. I understand that my work as an employee of the Company creates a relationship of trust and confidence between myself and the Company. During and after the period of my employment with the Company and its affiliates, I will not use or disclose or allow anyone else to use or disclose any Confidential Information except as may be necessary in the performance of my work for the Company and its affiliates or as may be authorized in advance by appropriate officers of the Company. Except as set forth herein, I will keep all Confidential Information secret and will not allow any unauthorized use of the same, whether or not any document containing it is marked as confidential. In addition, if I am requested or required (by oral questions, interrogatories, requests for information, subpoena, civil investigative demand, or similar process) to disclose any Confidential Information,

it is agreed that I will provide the Company with prompt written notice of such request(s) so that the Company may seek an appropriate protective order. If, failing the entry of a protective order, I am, in the opinion of my counsel, compelled to disclose any Confidential Information under pain of liability for contempt or other censure or penalty, I may disclose only that portion of such Confidential Information as is legally required without liability hereunder; provided, that I agree to exercise my reasonable efforts to obtain assurance that confidential treatment will be accorded such Confidential Information. Upon termination of my employment with the Company and its affiliates, I will promptly deliver to the Company all documents and materials of any nature pertaining to my employment with the Company and I will not take with me any documents or materials or copies thereof containing any Confidential Information. Notwithstanding the foregoing, I am hereby notified that federal law provides for immunity from liability for the confidential disclosure of a trade secret as defined by federal law that is made (i) in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney if that disclosure is made solely for the purpose of reporting or investigating a suspected violation of law, or (ii) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

6. Non-Solicitation. I understand that my work as an employee of the Company creates a relationship of trust and confidence between myself and the Company. During my employment with the Company and its affiliates and for a period of one (1) year thereafter, I will not request or otherwise attempt to induce or influence, directly or indirectly, any present customer, licensor or supplier, or prospective customer, licensor or supplier, of the Company or other persons sharing a business relationship with the Company to cancel, to limit, divert, reduce or postpone their business with the Company, or otherwise take any action which might be to the disadvantage of the Company. During my employment with the Company and for a period of one (1) year thereafter, I will not hire or solicit for employment, directly or indirectly, or induce or actively attempt to influence, any agent, consultant or Employee of the Company or any Affiliate of the Company, as such capitalized terms are defined in the Securities Act of 1933, as amended, to terminate his or her employment or discontinue such person's consultant, contractor or other business association with the Company.

7. Non-Compete. During my employment with the Company and its affiliates and for a period of one (1) year thereafter, I will not directly or indirectly, for myself, or on behalf of any other person, firm, corporation or other entity (except the Company or any of its affiliate whether as principal, agent, debtor, executive, consultant, joint venturer, investor, employee, stockholder, partner, officer, member, manager, director, sole proprietor or in any other capacity, engage in, manage, own, operate, control, participate in the ownership, management, operation or control of or assist in any person or entity, whose business activities involve (i) drugs for the treatment of cancer indications for which Company owned assets are being actively developed by the Company. This provision may be modified or waived by written consent of the Compensation Committee of the MAIA Biotechnology, Inc. Board of Directors.

8. Mutual Non-Disparagement. I agree that I will not make, publish, or communicate to any person or entity in any public form any defamatory or disparaging remarks, comments, or statements concerning the Company or its business, employees, customers or affiliates. I understand this provision is not meant to restrict my rights under Section 7 of the National Labor Relations Act. Company agrees that it will not make, publish, or communicate to any person or entity in any public form any defamatory or disparaging remarks, comments, or statements concerning you.

9. Other Agreements. I represent that my performance of all the terms of this Agreement and my duties as an employee of the Company will not breach any invention assignment agreement, confidential information agreement, non-competition agreement or other agreement with any former employer or any other party. I represent that I have not and will not bring with me to the Company or use in the performance of my duties for the Company or its affiliates any documents or materials of a former employer that are not generally available to the public.

10. Disclosure of this Agreement. I do not hereby authorize the Company to notify others, including but not limited to customers of the Company and any of my future employers, of the terms of this Agreement and my responsibilities hereunder.

11. Injunctive Relief. I understand that in the event of a breach or threatened breach of this Agreement by me, the Company may suffer irreparable harm and monetary damages alone would not adequately compensate the Company. The Company will therefore be entitled to injunctive relief to enforce this Agreement in addition to any other remedies which the Company may be entitled to at law or hereunder, and such relief may be granted without the necessity of the Company showing any actual damage or irreparable harm, proving the inadequacy of its legal remedies, or posting any bond or other security proving actual monetary damages. I agree that if there is a question as to the enforceability of any of the provisions of this Agreement, I will not engage in any conduct inconsistent with or contrary to this Agreement until after the question has been resolved by a final judgment of a court of competent jurisdiction. In addition, while the duration of my covenants described in Sections 5, 6 and 7 above will be determined generally in accordance with the terms of those respective Sections, if I violate any of those covenants, I agree to extend it on the same terms and conditions for an additional period of time equal to the time that elapses from my violation to the later of (i) when the violation stops or (ii) the final resolution of any litigation stemming from such violation. In addition, in the event of any such breach, or any attempted or threatened breach, Employee agrees that the Company shall be entitled to recovery of the legal costs incurred, including reasonable attorney's fees, in any such action or suit. Nothing herein contained shall be construed to prevent the Company from obtaining any other remedy or combination of remedies as the Company may elect to invoke. The failure of the Company to promptly institute legal action upon any breach of this Agreement will not constitute a waiver of that or any other breach of this Agreement. The venue for any Court suit will be a state or federal court sitting in Chicago, Illinois.

12. Enforcement and Severability. I acknowledge that each of the provisions in this Agreement are separate and independent covenants. I agree that if any court shall determine that any provision of this Agreement is unenforceable with respect to its term or scope such provision shall nonetheless be enforceable by any such court upon such modified term or scope as may be determined by such court to be reasonable and enforceable. The remainder of this Agreement shall not be affected by the unenforceability or court ordered modification of a specific provision.

13. At-Will Employment. I understand and agree that this Agreement does not constitute or create a contract of employment, whether express or implied, between the Company and me. I am at all times an at-will employee of the Company, which means that either the Company or I may terminate the employment relationship at any time, with or without prior notice and with or without cause. Nothing in this Agreement promises employment for any specific duration or period of time. I acknowledge that the obligations of this Agreement survive the separation of my employment (regardless of which party initiated it), to the extent permitted by governing law.

14. Governing Law; Venue. The laws of the State of Illinois shall govern the interpretation, validity and performance of the terms of this Agreement, regardless of the law that might be applied under principles of conflicts of law. Any dispute arising under or with respect to this Agreement shall be brought and heard exclusively in mandatory binding arbitration pursuant to paragraph 11 of the Employment Agreement.

15. Superseding Agreement. I understand and agree that this Agreement contains the entire agreement of the parties with respect to subject matter hereof and supersedes all previous agreements and understandings between the parties with respect to its subject matter.

16. Acknowledgments. I acknowledge that I have read this agreement, was given the opportunity to ask questions and sufficient time to consult an attorney and I have either consulted an attorney or affirmatively decided not to consult an attorney. I understand that my obligations under this Agreement survive the termination of my employment with the Company.

I UNDERSTAND THAT I AM AN EMPLOYEE-AT-WILL WITH THE COMPANY, MEANING THAT EITHER I AM OR THE COMPANY IS COMPLETELY FREE TO TERMINATE OUR EMPLOYMENT RELATIONSHIP AT ANY TIME AND FOR ANY REASON OR FOR NO REASON, WITHOUT INCURRING ANY OBLIGATIONS OR LIABILITIES OF ANY KIND WHATSOEVER OTHER THAN AS MAY BE SET FORTH IN A SIGNED WRITING BETWEEN THE COMPANY AND ME. I FURTHER ACKNOWLEDGE THAT I HAVE HAD A FULL OPPORTUNITY TO REVIEW THIS AGREEMENT AND CONSULT WITH COUNSEL OF MY CHOICE IF I SO CHOOSE REGARDING ITS TERMS, AND THAT I AM FREELY ENTERING THIS AGREEMENT WITH A FULL UNDERSTANDING OF ITS EFFECTS. I FURTHER UNDERSTAND THAT THIS AGREEMENT SUPERSEDES ANY AND ALL PRIOR OR CONTEMPORANEOUS REPRESENTATIONS OR AGREEMENTS, WHETHER ORAL, WRITTEN, OR IMPLIED, AND MAY NOT BE MODIFIED IN ANY WAY EXCEPT BY A SIGNED WRITING WHICH SPECIFICALLY REFERS TO THIS AGREEMENT AND IS SIGNED BY AN OFFICER OR OTHER DULY AUTHORIZED REPRESENTATIVE OF THE COMPANY.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written below.

/s/ Joseph McGuire

Name of Employee: Joseph F. McGuire
Title: Chief Financial Officer

/s/ Vlad Vitoc

MAIA Biotechnology, Inc.
By:Vlad Vitoc, MD, MBA
Title: Chief Executive Officer and President

EXHIBIT B

PRIOR INVENTIONS:

EXHIBIT C

OPTION EXERCISE FORM

MAIA Biotechnology, Inc.
Attention: Chief Executive Officer

Dear Sir or Madam:

In accordance with and subject to the terms and conditions of the applicable Plan, I, the undersigned Grantee, hereby elect to exercise my Option granted pursuant to the Stock Option Award Agreement dated (the "Agreement"), to purchase that number of shares of common stock, par value $0.0001 per share (the "Common Stock"), of MAIA Biotechnology, Inc. (the "Company") as is set forth below. Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Agreement.

Option Information:

Date of Grant:	_____
Number of Option Shares:	_____
Option Price:	$8.00
Type of Options:	Non-Qualified Stock Options (NSO or NQSO)

Exercise Information

Number of Option Shares Being Exercised:	_____
Total Exercise Price for Options Being Exercised:	_____
Form of Payment:	_____
Name in which the Options Shares should be registered.	_____
Address for Delivery of Certificate:	_____
	_____
	_____

Representations and Warranties of Grantee:

I hereby represent and warrant that I am acquiring the Option Shares purchased hereunder for investment purposes and not with a view to the sale or distribution thereof. I understand that such Option Shares have not been registered under the Securities Act of 1933, as amended (the "Act"), or any state securities laws, by reason of their issuance in a transaction exempt from the

registration requirements thereof and that the Option Shares may not be resold or otherwise transferred except pursuant to an effective registration statement unless the company determines that such resale or other transfer may be effected without registration by virtue of an exemption therefrom.

I understand that the Option Shares acquired through the exercise of my Option granted under the Agreement is subject to rights of first refusals, restrictions on transfer and other restrictions set forth in the Plan, the Company's certificate of incorporation, by-laws, and other pertinent stockholders' agreements that may be in place as amended, restated or otherwise modified from time to time. If requested by the Company, I agree to read, execute, and deliver counterpart signature pages to any stockholders' agreements that may be required to be entered into by me in connection with the exercise of my Option hereby.

Sincerely yours,

Signed: _____

Dated: _____

Name: _____

EXHIBIT D:

MAIA Biotechnology, Inc.

Job Description

CHIEF FINANCIAL OFFICER

POSITION DESCRIPTION

Position: Chief Financial Officer (CFO)

Reports to: Chief Executive Officer (CEO), Board of Directors Audit Committee

Functional Responsibilities: Oversees Finance, Accounting, Tax, Treasury, Investor Relations, Financial Initiatives and Reporting. Collaborates on Strategic/Business Planning, Forecasting, Budgeting, Corporate Development, Talent Resources, Technology Planning and Business Development with C-level team.

Position Support: The CFO shall be provided proper staffing, either internal or external, to staff functions under their responsibility. The CFO position directs, but does not perform, the functions of Auditor, Tax Director, Controller or those positions' typical staff. The CFO shall be provided adequate support, funding and resources to perform the responsibilities listed herein.

Position Overview: The CFO position is accountable for the administrative, financial, reporting and risk management functions of the company, to include the development of a financial strategy, metrics tied to that strategy, and the ongoing development and monitoring of control systems designed to preserve company assets and report accurate financial results. The CFO is also accountable for the company's investor relations, collaborates on strategic planning, corporate development and business development activities. Principal accountabilities and areas of influence or oversight are as follows:

- Contribute to formulating the company's future strategic direction and supporting tactical initiatives
- Participate in key decisions as a member of the executive management team and interacts with Board of Directors
- Maintain in-depth relations with all members of the management team
- Co-lead, with CEO, fund-raising and public offering processes and act as liaison with financial institutions, potential investors and other team members.
    - Identify potential investors
    - Coordinate the preparation of investor presentations
    - Contact target investors and facilitate follow-on interactions

- Lead internal financial due diligence processes
- Negotiate terms with investors

- Leadership and oversight of:
  - Financial initiatives including private and public offerings
  - Financing transaction closings
  - Organization development supporting evolution into a quality public company with efficient supportive Financial and related resources
  - Compliant Financial Reporting, associated facilitation and regulatory requirements
  - Financial record keeping meets the requirements of auditors and government agencies
  - Maintain relations with external auditors and investigate their findings and recommendations
  - Report risk issues to the Audit Committee of the Board of Directors
  - Review and approve all external financial and corporate reporting to external entities and agencies (e.g. Investors, IRS, SEC, third parties)
  - Report financial results to the Board of Directors
  - Forecast budget, cash positions and requirements
  - Ensure that transactional accounts are adequately funded
  - Implement Financial and Accounting operational best practices for all areas of responsibility
  - Third parties to which Finance and Accounting support have been outsourced and develop best practices for productive strategic business relationships
  - Company's reporting and transaction processing systems
  - Implementation and management of the accounting structure, methods, systems and operating procedures
  - Develop performance measures and monitoring systems that support the company's strategic direction
  - General ledger accounting and treasury transactions
  - Periodic closing of the books and preparation of financial reports
  - Analysis of financial performance to standards and to budgets/goals and assist functional areas with Departmental analysis
  - Issuance of financial information
  - Development of financial and tax strategies
  - Financial due diligence and negotiations
  - Financial functional areas of subsidiary companies, partnered or ventured entities and foreign operations
  - Understand and mitigate key elements of the company's risk profile
  - Maintain appropriate insurance coverage
- In collaboration and partnership:
  - With the company's CEO other C-Level Management:
    - Communicate with investors and other key company stakeholders

        - Third-party strategic alliance management
        - All internal business development strategies and tactics, as well as external business development activities
    - With General Counsel or other authorized officer:
        - Review and co-approve any contract affecting the financial or risk aspects of the company
        - Monitor all open legal issues involving the company, and legal issues affecting the industry
    - With COO and other C-level Management:
        - The capital request and budgeting processes
        - Select and develop financial accounting and reporting systems
        - Ensure that information and data systems controlling or integrated with financial systems or containing such data are adequate, secure and meet required regulations
        - Construct and monitor reliable control systems
        - Talent Resources, data management and technology planning for Finance and Accounting
        - Development and delivery of strategic/business plans
        - Monitor and direct the implementation of strategic business plans including development of initiatives and product portfolio analyses to ensure alignment and progress

Desired Qualifications: The candidate Chief Financial Officer should have a master's degree in accounting or business administration, and 10+ years of progressively responsible relevant experience in a related pharmaceutical or biotechnology industry company. Should have leadership experience in preparing and building organizations for public offering readiness and proven ability to manage all aspects of the Company's financial operations, including controllership, financial planning and analysis, tax, treasury, and finance. Should have experience in partnering with and advising an executive team and Board of Directors. Should have IPO expertise, and post-IPO public company experience. Possess high level written and oral communication skills.

Working Conditions: The CFO will initially work from home and interact virtually with other executives and employees. Relocation to an office outside the CFO's home city is not expected in the near or intermediate term. Moderate travel will be necessary to attend industry conferences and meetings with the Executive Management Team, Board of Directors, strategic partners, investors and other external parties.

/s/ Vlad Vitoc	8/2/2021	/s/ Joseph McGuire
Chief Executive Officer	Date	Chief Financial Officer

Exhibit 10.6

Original Agreement: July 26, 2021

Amended Agreement: Effective date when $12M Qualified Funds Raised is Reached

Mihail Obrocea
3654 Pinot Grigio Dr
Reno, NV 89509

Re: Amended and Restated Executive Employment Agreement by MAIA Biotechnology, Inc.

Dear Mihail:

I am very pleased to confirm our offer to you of continued employment with MAIA Biotechnology, Inc. (the "Company"), in the position of **Head of Clinical Development and Chief Medical Officer**, reporting to me, the date the $12M qualified funds raised is reached. This supersedes previous Employment Agreements to date.

The terms of our offer and the benefits currently provided by the Company are as follows:

1. **Salary**. The Base Salary is $380,000 annualized, (the "Base Salary"), payable in installments in accordance with the Company's regular payroll schedule.

In no circumstance will your salary be decreased during the term of your employment, except by mutual written agreement by you and the Company. In case the Company decides to prepare for an Initial Public Offering, the salary will be reviewed and adjusted to be commensurate with the significant workload increase in meeting pre and post-IPO relevant regulatory requirements.

2. **Cash Bonus**. You will be eligible for a discretionary annual bonus of up to 35% of Executive's Base Salary (the "Annual Bonus"), based on previous year performance. In determining whether to grant a bonus, in its discretion, the Board of Directors of the Company will take into account your performance and milestone achievements. Bonus payments are subject to approval and discretion of the Board of Directors of the Company. Performance objectives will be defined in alignment with the corporate goals. Target annual cash bonus is to be paid within 90 days of the subsequent year. Executive must remain an active employee through the end of any given calendar year in order to earn an Annual Bonus for that year.

3. **Performance Incentive Options**. You will be eligible for a discretionary annual Performance Incentive Options award beginning in 2021, based on previous year performance. In determining whether to grant an options bonus, in its discretion, the Board of Directors of the Company will take into account your performance and milestone achievements. Performance Incentive Options are subject to approval and discretion of the Board of Directors of the Company. Performance objectives will be defined in alignment with the corporate goals.

4. **Work Assignment and Location**. The Company may enter into loaned services or secondment agreements requiring that you provide similar services to Company subsidiaries or affiliates. Your job description and additional working conditions are set forth in Exhibit E.

5. **Benefits.** Subject to the Company having available funds, you and your dependents will be eligible to participate in regular health insurance and other employee benefit plans, as established by the Company. The Company does not accrue Paid Time Off. You may take personal or vacation time at your discretion subject to Company reasonable needs.

6. **Confidentiality**. As an executive employee of the Company, you will have access to certain confidential information of the Company and/or its affiliates and you may, during the course of your employment, develop certain information or inventions that will be the property of the Company and/or its affiliates. To protect the interests of the Company and its affiliates, you will need to sign the Company's "Employee Invention Assignment, Confidentiality, Non- Solicitation, and Non-Competition Agreement," (attached as Exhibit A) applying to the Company and its affiliates, as a condition of your employment. We wish to impress upon you that we do not want you to, and we hereby direct you not to, bring with you any confidential or proprietary material of any former employer, client or other person or to violate any other obligations you may have to any former employer, client or other person. During your employment with the Company and for one year thereafter, you agree that you will not engage, directly or indirectly, in any activity that is involving drugs for the treatment of cancer indication for which company owned assets are being actively developed by the Company. You will disclose to the Company in writing any such proposed employment, business or activity, and must receive written consent from the Compensation Committee of the MAIA Biotechnology Board of Directors. You will not assist any other person or organization in competing with the Company or its affiliates or in preparing to engage in competition with the business or proposed business of the Company or its affiliates.

7. **No Breach of Obligations to Prior Employers**. You represent that your signing of this offer letter, agreement(s) concerning stock options granted to you, if any, under the Plan (as defined below) and the Company's Employee Invention Assignment, Confidentiality and Non-Competition Agreement and your commencement of employment with the Company will not violate any agreement or duty that you have with any former employer, client or other person.

8. **Options**. As an executive of the Company, you may be provided stock option grants in the Company governed by the terms of the MAIA Biotechnology Stock Option Plan(s) and applicable agreements.

9. **At Will Employment**. While we look forward to a long and profitable relationship, should you decide to accept our offer, you will be an at-will employee of the Company, which means the employment relationship can be terminated by the Company or you for any reason, at any time, with or without prior notice (except as provided below) and with or without Cause, as defined below. Any statements or representations to the contrary (and, indeed, any statements contradicting any provision in this letter) are ineffective. Further, your participation

in any stock option or benefit program is not to be regarded as assuring you of continuing employment for any particular period of time. Any modification or change in your at will employment status may only occur by way of a written employment agreement signed by you and the Chief Executive Officer of the Company. For purposes of this Agreement, "*Cause*" means: (i) conviction of or plea of nolo contendere to a felony or a crime involving moral turpitude; (ii) engaging in an act of gross negligence or willful misconduct in the performance of your employment obligations and duties; (iii) committing an act of fraud against, or material misconduct or willful misappropriation of property belonging to the Company or its subsidiaries or affiliates; (iv) engaging in any other misconduct that has had or will have an adverse effect on the Company's or its subsidiaries or affiliates reputation or business; or (v) your material breach of the Employee Invention Assignment, Confidentiality and Non-Competition Agreement or other unauthorized misuse of the Company's or any of or its subsidiaries or other affiliates' trade secrets or proprietary information."

Notwithstanding the foregoing, in the event that the Company terminates the employment relationship without Cause, the Company shall owe you:

a) all accrued and unpaid Base Salary payable and accrued and unpaid deferred compensation earned as of the date of termination;

b) any Bonus or other such compensation earned and payable pursuant to any compensation program then in effect;

c) reimbursement, following submission by you to the Company of appropriate supporting documentation, for all incurred but unreimbursed reasonable and necessary business expenses for which you are entitled to reimbursement in accordance with the Company's written policies, as long as claims for such reimbursement (accompanied by supporting documentation) are submitted to the Company within 45 days following the date of your termination of employment;

d) the benefit of any options vested as of the termination date.

e) a severance payment equal to the Base Salary and benefits you otherwise would have received for the one year following your termination payable as salary continuation in accordance with the Company's normal payroll practices. This payment is consideration for the covenant not to compete in Exhibit A.

If you wish to terminate the employment relationship, we ask that you provide at least 14 calendar days' prior written notice to the Company.

10. **Authorization to Work**. Please note that because of employer regulations adopted in the Immigration Reform and Control Act of 1986, within three (3) business days of

starting your new position you will need to present documentation demonstrating that you have authorization to work in the United States.

11. **Arbitration**. You and the Company agree to submit to mandatory binding arbitration any and all claims arising out of or related to your employment with the Company and the termination thereof, including, but not limited to, claims for unpaid wages, wrongful termination, torts, stock or stock options or other ownership interest in the Company, and/or discrimination (including harassment) based upon any federal, state or local ordinance, statute, regulation or constitutional provision. The arbitrator shall issue a written decision that contains the essential findings and conclusions on which the decision is based. Arbitration shall be subject to the American Arbitration Association Employment Arbitration Rules and take place in Chicago, Illinois. Illinois law shall apply where state law is applicable. Venue for enforcement of any arbitration award shall be the state or federal courts in Chicago, Illinois. Each party may seek injunctive relief in court related to the improper use, disclosure or misappropriation of a party's private, proprietary, confidential or trade secret information or violation of the non-competition provisions in Exhibit A. The venue for any Court suit will be a state or federal court sitting in Chicago, Illinois.

THE PARTIES HEREBY WAIVE ANY RIGHTS THEY MAY HAVE TO TRIAL BY JURY.

This Agreement does not restrict your right to file administrative claims you may bring before any government agency where, as a matter of law, the parties may not restrict the employee's ability to file such claims (including, but not limited to, the National Labor Relations Board, the Equal Employment Opportunity Commission and the Department of Labor).

However, the parties agree that, to the fullest extent permitted by law, arbitration shall be the exclusive remedy for the subject matter of such administrative claims.

12. **Background Check**. This offer is contingent upon a satisfactory employment background check. This offer can be rescinded in the Company's discretion based upon any information received in the verification.

13. **Entire Agreement**. This offer, once accepted, constitutes the entire agreement between you and the Company with respect to the subject matter hereof and supersedes all prior offers, negotiations and agreements, if any, whether written or oral, relating to such subject matter, except for agreement(s) concerning stock options granted to you and the Company's Employee Invention Assignment, Confidentiality and Non-Competition Agreement. You acknowledge that neither the Company nor its agents have made any promise, representation or warranty whatsoever, either express or implied, written or oral, which is not contained in this agreement for the purpose of inducing you to execute the agreement, and you acknowledge that you have executed this agreement in reliance only upon such promises, representations and warranties as are contained herein.

14. **Acceptance**. This offer will remain open for two weeks after the effective date. If you decide to accept our offer, and I hope you will, please sign the enclosed copy of this letter in the space indicated and return it to me. Your signature will acknowledge that you have read and understood and agreed to the terms and conditions of this offer letter and the attached documents, if any. Should you have anything else that you wish to discuss, please do not hesitate to call me.

We look forward to the opportunity to welcome you to the Company.

Very truly yours,

/s/ Vlad Vitoc

Vlad Vitoc, MD, MBA
Chief Executive Officer and President

I have read and understood this offer letter and hereby acknowledge, accept and agree to the terms as set forth above and further acknowledge that no other commitments were made to me as part of my employment offer except as specifically set forth herein.

/s/ Mihail Obrocea Date signed: 8/2/2021
Mihail Obrocea, MD

EXHIBIT A

EMPLOYEE INVENTION ASSIGNMENT, CONFIDENTIALITY, NON-SOLICITATION, AND NON-COMPETE AGREEMENT

In consideration of my employment or continued employment by MAIA Biotechnology, Inc., a Delaware corporation (the "Company"), I hereby represent and agree as follows:

1. By virtue of my position, I understand that I will have and/or have had access to Confidential Information (as defined below) regarding the Company's customers, suppliers, business plans, software, intellectual property, processes and methods, development tools, scientific, technical and/or business innovations, and other information.

2. Definitions. The following definitions apply to this Agreement:

a. "Company Interest" means any business of the Company and its affiliates involving drugs for the treatment of cancer indication for which company owned assets are being actively developed by the Company.

b. "Intellectual Property Rights" means any and all intellectual property rights and other similar proprietary rights in any jurisdiction, whether registered or unregistered, and whether owned or held for use under license with any third party, including all rights and interests pertaining to or deriving from: (a) patents and patent applications, reexaminations, extensions and counterparts claiming property therefrom; inventions, invention disclosures, discoveries and improvements, whether or not patentable; (b) computer software and firmware, including data files, source code, object code and software-related specifications and documentation; (c) works of authorship, whether or not copyrightable; (d) trade secrets (including those trade secrets defined in the Uniform Trade Secrets Act and under corresponding statutory law and common law), business, technical and know-how information, non-public information, and confidential information and rights to limit the use of disclosure thereof by any person; (e) trademarks, trade names, service marks, certification marks, service names, brands, trade dress and logos and the goodwill associated therewith; (f) proprietary databases and data compilations and all documentation relating to the foregoing, including manuals, memoranda and record; (g) domain names; and (h) licenses of any of the foregoing; including in each case any registrations of, applications to register, and renewals and extensions of, any of the foregoing with or by any governmental authority in any jurisdiction.

c. "Invention" means any products, process, ideas, improvements, discoveries, inventions, designs, algorithms, financial models, writings, works of authorship, content, graphics, data, software, specifications,

instructions, text, images, photographs, illustration, audio clips, trade secrets and other works, material and information, tangible or intangible, whether or not it may be patented, copyrighted or otherwise protected (including all versions, modifications, enhancements and derivative work thereof).

d. "Confidential Information" means confidential, secret or other non-public or proprietary information of or about the Company and its affiliates, their respective products, licensors, suppliers or customers and shall include, without limitation, information regarding: Inventions, methodologies, processes, tools, computer programs and documentation, manufacturing and application information, business strategies, financial information, forecasts, personnel information, customer lists or other customer information, trade secrets, new product developments, market information and advertising, business and marketing plans relating to the Company and its affiliates and any other non-public information, whether in writing or given to me orally, which I know or have reason to know the Company would like to treat as confidential for any purpose, such as maintaining a competitive advantage or avoiding undesirable publicity.

3. Assignment of Intellectual Property Rights. In consideration of my employment and/or continued employment, I agree to be bound by this Section 3.

a. General. I agree to assign, and hereby do assign, to the Company all of my rights in any Inventions (as defined above) (including all Intellectual Property Rights, as defined above) that are made, conceived or reduced to practice, in whole or in part and whether alone or with others, by me during my employment by, or service with, the Company or any of its affiliates or which arise out of any activity conducted by, for or under the direction of the Company or any of its affiliates (whether or not conducted at the Company's or any of its affiliates' facilities, working hours or using any of the Company's or its affiliates' assets), or which are useful with, or relate directly or indirectly to, any Company Interest (as defined above). I will promptly and fully disclose and provide all of the Inventions described above (the "Assigned Inventions") to the Company.

b. Assurances. I hereby agree during the duration of my employment by, or service with, the Company and thereafter to further assist the Company, at the Company's expense, to evidence, record and perfect the Company's rights in and ownership of the Assigned Inventions, to perfect, obtain, maintain, enforce and defend any rights specified to be so owned or assigned and to provide and execute all documentation necessary to effect the foregoing.

c. Other Inventions. I agree to not incorporate, or permit to be incorporated, any Invention conceived, created, developed or reduced to practice by me (alone or with others) prior to or independently of my employment by, or service with, the Company or its affiliates (collectively, "Prior Inventions") in any work I perform for the Company or its affiliates, without the Company's prior written consent. My Prior Inventions are listed in Exhibit B.

d. Moral Rights. To the extent allowed by applicable law, the terms of this Section 3 shall include all right of paternity, integrity, disclosure and withdrawal and any other rights that may be known as or referred to as moral right, artist's rights, droit moral or the like (collectively, "Moral Rights"). To the extent I retain any such Moral Rights under applicable law, I hereby ratify and consent to any action that may be taken with respect to such Moral Rights by, or authorized by, the Company and agree not to assert any Moral Rights with respect thereto. I will confirm any such ratification, consent or agreement from time to time as requested by the Company.

4. Publicity. I consent to any and all uses and displays by the Company of my name, voice, likeness, image, appearance and biographical information in or in connection with any pictures, photographs, audio and video recordings, digital images, websites, television programs, and other advertising and/or printed and electronic forms and media ("Permitted Use"). I hereby release the Company from any and all claims, actions, damages, costs, and liability of any kind in connection with any Permitted Use.

5. Protection of Confidential Information of the Company. I understand that my work as an employee of the Company creates a relationship of trust and confidence between myself and the Company. During and after the period of my employment with the Company and its affiliates, I will not use or disclose or allow anyone else to use or disclose any Confidential Information except as may be necessary in the performance of my work for the Company and its affiliates or as may be authorized in advance by appropriate officers of the Company. Except as set forth herein, I will keep all Confidential Information secret and will not allow any unauthorized use of the same, whether or not any document containing it is marked as confidential. In addition, if I am requested or required (by oral questions, interrogatories, requests for information, subpoena, civil investigative demand, or similar process) to disclose any Confidential Information, it is agreed that I will provide the Company with prompt written notice of such request(s) so that the Company may seek an appropriate protective order. If, failing the entry of a protective order, I am, in the opinion of my counsel, compelled to disclose any Confidential Information under pain of liability for contempt or other censure or penalty, I may disclose only that portion of such Confidential Information as is legally required without liability hereunder; provided, that I agree to exercise my reasonable efforts to obtain assurance that confidential treatment will be accorded such Confidential Information. Upon termination of my employment with the Company and its affiliates, I will promptly deliver to the Company all documents and materials of any nature

pertaining to my employment with the Company and I will not take with me any documents or materials or copies thereof containing any Confidential Information. Notwithstanding the foregoing, I am hereby notified that federal law provides for immunity from liability for the confidential disclosure of a trade secret as defined by federal law that is made (i) in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney if that disclosure is made solely for the purpose of reporting or investigating a suspected violation of law, or (ii) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

6. Non-Solicitation. I understand that my work as an employee of the Company creates a relationship of trust and confidence between myself and the Company. During my employment with the Company and its affiliates and for a period of one (1) year thereafter, I will not request or otherwise attempt to induce or influence, directly or indirectly, any present customer, licensor or supplier, or prospective customer, licensor or supplier, of the Company or other persons sharing a business relationship with the Company to cancel, to limit, divert, reduce or postpone their business with the Company, or otherwise take any action which might be to the disadvantage of the Company. During my employment with the Company and for a period of one (1) year thereafter, I will not hire or solicit for employment, directly or indirectly, or induce or actively attempt to influence, any agent, consultant or Employee of the Company or any Affiliate of the Company, as such capitalized terms are defined in the Securities Act of 1933, as amended, to terminate his or her employment or discontinue such person's consultant, contractor or other business association with the Company.

7. Non-Compete. During my employment with the Company and its affiliates and for a period of one (1) year thereafter, I will not directly or indirectly, for myself, or on behalf of any other person, firm, corporation or other entity (except the Company or any of its affiliates), whether as principal, agent, debtor, executive, consultant, joint venturer, investor, employee, stockholder, partner, officer, member, manager, director, sole proprietor or in any other capacity, engage in, manage, own, operate, control, participate in the ownership, management, operation or control of or assist in any person or entity, whose business activities involve (i) drugs for the treatment of cancer indications for which Company owned assets are being actively developed by the Company. This provision may be modified or waived by written consent of the Compensation Committee of the MAIA Biotechnology, Inc. Board of Directors.

8. Mutual Non-Disparagement. I agree that I will not make, publish, or communicate to any person or entity in any public form any defamatory or disparaging remarks, comments, or statements concerning the Company or its business, employees, customers or affiliates. I understand this provision is not meant to restrict my rights under Section 7 of the National Labor Relations Act. Company agrees that it will not make, publish, or communicate to any person or entity in any public form any defamatory or disparaging remarks, comments, or statements concerning you.

9. Other Agreements. I represent that my performance of all the terms of this Agreement and my duties as an employee of the Company will not breach any invention

assignment agreement, confidential information agreement, non-competition agreement or other agreement with any former employer or any other party. I represent that I have not and will not bring with me to the Company or use in the performance of my duties for the Company or its affiliates any documents or materials of a former employer that are not generally available to the public.

10. Disclosure of this Agreement. I do not hereby authorize the Company to notify others, including but not limited to customers of the Company and any of my future employers, of the terms of this Agreement and my responsibilities hereunder.

11. Injunctive Relief. I understand that in the event of a breach or threatened breach of this Agreement by me, the Company may suffer irreparable harm and monetary damages alone would not adequately compensate the Company. The Company will therefore be entitled to injunctive relief to enforce this Agreement in addition to any other remedies which the Company may be entitled to at law or hereunder, and such relief may be granted without the necessity of the Company showing any actual damage or irreparable harm, proving the inadequacy of its legal remedies, or posting any bond or other security proving actual monetary damages. I agree that if there is a question as to the enforceability of any of the provisions of this Agreement, I will not engage in any conduct inconsistent with or contrary to this Agreement until after the question has been resolved by a final judgment of a court of competent jurisdiction. In addition, while the duration of my covenants described in Sections 5, 6 and 7 above will be determined generally in accordance with the terms of those respective Sections, if I violate any of those covenants, I agree to extend it on the same terms and conditions for an additional period of time equal to the time that elapses from my violation to the later of (i) when the violation stops or (ii) the final resolution of any litigation stemming from such violation. In addition, in the event of any such breach, or any attempted or threatened breach, Employee agrees that the Company shall be entitled to recovery of the legal costs incurred, including reasonable attorney's fees, in any such action or suit. Nothing herein contained shall be construed to prevent the Company from obtaining any other remedy or combination of remedies as the Company may elect to invoke. The failure of the Company to promptly institute legal action upon any breach of this Agreement will not constitute a waiver of that or any other breach of this Agreement. The venue for any Court suit will be a state or federal court sitting in Chicago, Illinois.

12. Enforcement and Severability. I acknowledge that each of the provisions in this Agreement are separate and independent covenants. I agree that if any court shall determine that any provision of this Agreement is unenforceable with respect to its term or scope such provision shall nonetheless be enforceable by any such court upon such modified term or scope as may be determined by such court to be reasonable and enforceable. The remainder of this Agreement shall not be affected by the unenforceability or court ordered modification of a specific provision.

13. At-Will Employment. I understand and agree that this Agreement does not constitute or create a contract of employment, whether express or implied, between the Company and me. I am at all times an at-will employee of the Company, which means that either

the Company or I may terminate the employment relationship at any time, with or without prior notice and with or without cause. Nothing in this Agreement promises employment for any specific duration or period of time. I acknowledge that the obligations of this Agreement survive the separation of my employment (regardless of which party initiated it), to the extent permitted by governing law.

14. Governing Law; Venue. The laws of the State of Illinois shall govern the interpretation, validity and performance of the terms of this Agreement, regardless of the law that might be applied under principles of conflicts of law. Any dispute arising under or with respect to this Agreement shall be brought and heard exclusively in mandatory binding arbitration pursuant to paragraph 11 of the Employment Agreement.

15. Superseding Agreement. I understand and agree that this Agreement contains the entire agreement of the parties with respect to subject matter hereof and supersedes all previous agreements and understandings between the parties with respect to its subject matter.

16. Acknowledgments. I acknowledge that I have read this agreement, was given the opportunity to ask questions and sufficient time to consult an attorney and I have either consulted an attorney or affirmatively decided not to consult an attorney. I understand that my obligations under this Agreement survive the termination of my employment with the Company.

I UNDERSTAND THAT I AM AN EMPLOYEE-AT-WILL WITH THE COMPANY, MEANING THAT EITHER I AM OR THE COMPANY IS COMPLETELY FREE TO TERMINATE OUR EMPLOYMENT RELATIONSHIP AT ANY TIME AND FOR ANY REASON OR FOR NO REASON, WITHOUT INCURRING ANY OBLIGATIONS OR LIABILITIES OF ANY KIND WHATSOEVER OTHER THAN AS MAY BE SET FORTH IN A SIGNED WRITING BETWEEN THE COMPANY AND ME. I FURTHER ACKNOWLEDGE THAT I HAVE HAD A FULL OPPORTUNITY TO REVIEW THIS AGREEMENT AND CONSULT WITH COUNSEL OF MY CHOICE IF I SO CHOOSE REGARDING ITS TERMS, AND THAT I AM FREELY ENTERING THIS AGREEMENT WITH A FULL UNDERSTANDING OF ITS EFFECTS. I FURTHER UNDERSTAND THAT THIS AGREEMENT SUPERSEDES ANY AND ALL PRIOR OR CONTEMPORANEOUS REPRESENTATIONS OR AGREEMENTS, WHETHER ORAL, WRITTEN, OR IMPLIED, AND MAY NOT BE MODIFIED IN ANY WAY EXCEPT BY A SIGNED WRITING WHICH SPECIFICALLY REFERS TO THIS AGREEMENT AND IS SIGNED BY AN OFFICER OR OTHER DULY AUTHORIZED REPRESENTATIVE OF THE COMPANY.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written below.

/s/ Mihail Obrocea

Name of Employee: Mihail Obrocea, MD
Title: Head of Clinical Development and Chief Medical Officer

/s/ Vlad Vitoc

MAIA Biotechnology, Inc. By: Vlad Vitoc
Title: Chief Executive Officer & President

EXHIBIT B

PRIOR INVENTIONS:

- TEC kinases project: invention related to Interleukine-2-Inducible T-cell kinase (ITK), a TKIs platform based on proprietary chemistry with applications across both hematology, oncology and immune- related diseases
- Epigenetic Cancer Modifiers: invention relates to discovery and development of small molecule compounds and their use as pharmaceuticals in treating cancer and other diseases associated with the inhibition of histone acetylase transferases (HATs)

EXHIBIT C

OPTION EXERCISE FORM

MAIA Biotechnology, Inc.
Attention: Chief Executive Officer

Dear Sir or Madam:

In accordance with and subject to the terms and conditions of the applicable stock option plan, I hereby elect to exercise my option granted under the Stock Option Award Agreement dated _____, to purchase _____ (_____) shares, par value $0.0001 per share, of common stock of MAIA Biotechnology, Inc. (the "Company").

Enclosed herewith is payment to the Company in the amount of _____ U.S. Dollars ($) in full payment of the option price for said shares.

I hereby represent and warrant that I am acquiring the shares purchased hereunder for investment and not with a view to the sale or distribution thereof. I understand that such shares have not been registered under the Securities Act of 1933, as amended (the "Act"), by reason of their issuance in a transaction exempt from the registration requirement of the Act pursuant to Section 4(2) thereof and that the shares may not be resold or otherwise transferred except pursuant to a registration statement which has become effective under the Act unless the Company determines that such resale or other transfer may be effected without registration under the Act by virtue of an exemption therefrom.

I understand that the shares acquired through the exercise of my option granted under the Stock Option Award Agreement referenced above may be subject to rights of first refusals, restrictions on transfer and other restrictions set forth in the Company's certificate of incorporation, by-laws, and other pertinent stockholders' agreements that may be in place from time to time. If requested by the Company, I agree to read, execute and deliver counterpart signature pages to any stockholders' agreements that may be required to be entered into by me in connection with the exercise of my option hereby.

Sincerely yours,

Dated: _____ _____

Name: _____

EXHIBIT D:

MAIA Biotechnology, Inc.

Job Description

HEAD OF CLINICAL DEVELOPMENT and CHIEF MEDICAL OFFICER

Job Title:	Head of Development and Chief Medical Officer
Reports to:	President and Chief Executive Officer

Position Summary:

The Chief Medical Officer will report directly to the Chief Executive Officer and is a key member of the senior management team. The primary role of the CMO will be to provide leadership, strategic development and tactical implementation of MAIA's clinical studies and programs consistent with MAIA's corporate strategy. This will include providing direct medical/physician oversight for clinical trials, and medical input into all aspects of development and other company needs.

Essential Duties and Responsibilities:

To perform this job successfully, an individual must be able to perform the following:

- Direct the development of clinical strategies and plans to integrate MAIA compounds into the standard practice of oncology/hematology
- Provide medical and scientific expertise regarding MAIA's disease areas to support management team with medical expertise contributing to the overall corporate strategy and needs.
- Oversee clinical trials as medical expert
- Oversees Medical Affairs responsibilities for the company
- Develop and update the strategy for the clinical development plan (CDP) according to the Corporate Strategy.
- Contribute the clinical aspects of regulatory strategies, filings, and support interactions with Health Authorities as the medical expert
- Primarily contributes to the development and writing of clinical protocols and investigator brochures
- Oversee the analysis and interpretation of clinical trial data, review/approval of clinical study reports and contribute to the reporting of clinical trial results
- Identify, establish relationships and lead interactions with leading academic thought leaders, investigators, cooperative groups, and other clinical stakeholders

- Provide clinical support and work with other members of the management team to develop and communicate the overall corporate strategy
- Collaborates with COO in planning, budgeting and operational management of all development projects and programs.
- Collaborates with COO in managing relationships with CROs to ensure trials of the highest possible standards.
- Consults with other executives, staff, and board members about development programs.
- Collaborates with senior team and supports business planning process and corporate development activities.
- Represent the Company and its programs to external audiences, including the investment, medical and regulatory communities, as well as pharmaceutical or biotechnology industry collaborators/partners
- Ensure necessary compliance requirements are met by the company

Required skills and personal characteristics

- Maintains deep scientific knowledge and attention to detail in designing and testing hypotheses and analyzing data
- Builds wide and effective networks of contacts inside and outside the organization, across a diverse spectrum of people
- Strong ability to command respect from KOLs with a high level of personal integrity. Gathers comprehensive information to support decision making.
- Sets and develops strategies and works strategically to realize organizational goals. Identifies and develops positive and compelling visions of the organization's future potential.
- Deals with ambiguity, making positive use of the opportunities it presents, adapts to changing circumstances
- Works productively in a high-pressure environment and balances the demands of work and personal life
- Open minded; willing to learn and take on both "important" as well as "small" tasks and duties on different levels

Qualifications:

Education/Experience:

- MD with Board Certification in Hematology/Oncology preferred
- Strong clinical background in oncology required. Experience in immuno-oncology and development of first-in-class therapies is an advantage.
- 15 years minimum experience in clinical practice treating patients and pharmaceutical and/or biotechnology industry experience as a sponsor working on investigational new drugs.
- Experience from the pharmaceutical or biotech industry
- Experience in preclinical and early/late clinical development
- Experience in clinical trials, either as investigator or as industry medical representative

- Multiple years of management experience leading a clinical group including clinical/medical affairs and clinical operations
- A proven success record in Phase I-IV clinical research studies and trial design as well as the successful submission of IND's and marketing approval-directed filings (BLA's, NDA's, and MAA's)
- Excellent oral and written communication skills with successful presentation capabilities
- Computer skills (Microsoft Office)

Knowledge, Skills and Abilities:

- Knowledge of relevant FDA regulations and guidelines as well as those of the EU and other health authorities; experience in interactions with FDA personnel is essential; experience in interactions with other health authorities a plus
- Experience with, or strong knowledge of Oncology drug development
- Experience or knowledge of Orphan disease drug development a plus
- Experience in translational medicine, clinical pharmacology and early-stage development is desirable
- Excellent knowledge of the competitive environment for drugs in the Hematology/Oncology marketplace and in research and development pipelines
- Must have a thorough knowledge of clinical research concepts, practices, and GCP and ICH Guidelines.
- The successful candidate will possess excellent communication skills and will be capable of articulating the Company's clinical and regulatory strategies and progress to a wide audience including the CEO, the Board of Directors, Company employees, and the investor community.
- Must have excellent leadership and interpersonal skills; should have proven skills as an effective team player who can engender credibility and confidence within and outside the company; must have outstanding executive presence.
- Must be science- and data-driven
- For best fit, the candidate must have the ability and strong desire to "make things happen"
- Must have a results-oriented work ethic and a positive, can-do attitude. Effective leadership, people management, communication skills and a team builder management style are
- essential; must be willing and able to be "hands on".
- Must have the highest personal values and ethical standards.

Work Environment:

This is a high growth, fast paced small organization. The ability to be productive and successful in an intense work environment is critical. Willingness and ability to travel domestically and internationally is required, it is anticipated that this will be 30 % of work time.

Physical Demands: The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The above job description is not intended to be an all-inclusive list of duties and standards of the position. Incumbents will follow any other instructions, and perform any other related duties, as assigned by their supervisor.

Job Description Approved by:

/s/ Vlad Vitoc	8/2/2021	/s/Mihail Obrocea	8/2/2021
	Date:		Date:
Chief Executive Officer		Chief Medical Officer	
Date			

Exhibit 10.7

INDEMNITY AGREEMENT

THIS INDEMNITY AGREEMENT (this "***Agreement***") dated as of _____ ____, 2022, is made by and between **MAIA BIOTECHNOLOGY, INC.,** a Delaware corporation (the "***Company***"), and _____ ("***Indemnitee***"), and will become effective upon the closing of the Company's initial public offering.

RECITALS

A. The Company desires to attract and retain the services of highly qualified individuals as directors, officers, employees and agents.

B. The Company's Amended and Restated Bylaws (the "***Bylaws***") require that the Company indemnify its directors and officers, and empowers the Company to indemnify its employees and other agents, as authorized by the Delaware General Corporation Law, as amended (the "***Code***"), under which the Company is organized and such Bylaws expressly provide that the indemnification provided therein is not exclusive and contemplates that the Company may enter into separate agreements with its directors, officers and other persons to set forth specific indemnification provisions.

C. Indemnitee does not regard the protection currently provided by applicable law, the Bylaws, the Company's other governing documents, and available insurance as adequate under the present circumstances, and the Company has determined that Indemnitee and other directors, officers, employees and agents of the Company may not be willing to serve or continue to serve in such capacities without additional protection.

D. The Company desires and has requested Indemnitee to serve or continue to serve as a director, officer, employee or agent of the Company, as the case may be, and has proffered this Agreement to Indemnitee as an additional inducement to serve in such capacity.

E. Indemnitee is willing to serve, or to continue to serve, as a director, officer, employee or agent of the Company, as the case may be, if Indemnitee is furnished the indemnity provided for herein by the Company.

AGREEMENT

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth herein, the parties hereto, intending to be legally bound, hereby agree as follows:

1. Definitions.

(a) Agent. For purposes of this Agreement, the term "***Agent***" of the Company means any person who: (i) is or was a director**,** officer, employee, consultant, agent, or other fiduciary of the Company or a subsidiary of the Company; or (ii) is or was serving at the request or for the convenience of, or representing the interests of, the Company or a subsidiary of the Company, as a director, officer, employee, agent, or other fiduciary of a foreign or domestic corporation, partnership, joint venture, trust or other enterprise.

(b) Change in Control. For purposes of this Agreement, a "***Change in Control***" shall be deemed to have occurred if (i) any "person" (as such term is used in Sections 13(d) and 14(d) of the

Securities Exchange Act of 1934, as amended (the "***Exchange Act***"), other than a trustee or other fiduciary holding securities under an employee benefit plan of the Company or a corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company, is or becomes the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing 20% or more of the total voting power represented by the Company's then outstanding Voting Securities (as defined below), (ii) individuals who on the date of this Agreement are members of the Board (the "***Incumbent Board***") cease for any reason to constitute at least a majority of the members of the Board (*provided, however,* that if the appointment or election (or nomination for election) of any new Board member was approved or recommended by a majority vote of the members of the Incumbent Board then still in office, such new member shall be considered as a member of the Incumbent Board), or (iii) the stockholders of the Company approve a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which 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) at least 80% of the total voting power represented by the Voting Securities of the Company or such surviving entity outstanding immediately after such merger or consolidation, or the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of (in one transaction or a series of transactions) all or substantially all of the Company's assets.

(c) Expenses. For purposes of this Agreement, the term "***Expenses***" shall be broadly construed and shall include, without limitation, all direct and indirect costs of any type or nature whatsoever, including, without limitation, all attorneys', witness, or other professional fees and related disbursements, and other out-of-pocket costs of whatever nature, actually and reasonably incurred by Indemnitee in connection with the investigation, defense or appeal of a proceeding or establishing or enforcing a right to indemnification under this Agreement, the Code or otherwise. The term "***Expenses***" shall also include reasonable compensation for time spent by Indemnitee for which he or she is not compensated by the Company or any subsidiary or third partyif the rate of compensation and estimated time involved is approved by the directors of the Company who are not parties to any action with respect to which Expenses are incurred.

(d) Independent Counsel. For purposes of this Agreement, the term "***Independent Counsel***" means a law firm, or a partner (or, if applicable, member) of such a law firm, that is experienced in matters of corporation law and neither presently is, nor in the past five (5) years has been, retained to represent: (i) the Company or Indemnitee in any matter material to either such party, or (ii) any other party to the proceeding giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "***Independent Counsel***" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee's rights under this Agreement. The Company will pay the reasonable fees and expenses of the Independent Counsel referred to above and to fully indemnify such counsel against any and all expenses, claims, liabilities and damages (excluding any legal malpractice or professional misconduct claims) arising out of or relating to this Agreement or its engagement pursuant hereto.

(e) Liabilities. For purposes of this Agreement, the term "***Liabilities***" shall be broadly construed and shall include, without limitation, judgments, damages, deficiencies, liabilities, losses, penalties, excise taxes, fines, assessments and amounts paid in settlement, including any interest and any federal, state, local or foreign taxes imposed as a result of the actual or deemed receipt of any payment under this Agreement.

(f) Proceedings. For purposes of this Agreement, the term "***proceeding***" shall be broadly construed and shall include, without limitation, any threatened, pending, or completed action, suit, claim, counterclaim, cross claim, arbitration, mediation, alternate dispute resolution mechanism, investigation, inquiry, administrative hearing, or any other actual, threatened or completed proceeding, whether brought in the right of the Company or otherwise and whether of a civil, criminal, administrative or investigative nature, and whether formal or informal in any case, in which Indemnitee was, is or will be involved as a party, potential party, non-party witness, or otherwise by reason of: (i) the fact that Indemnitee is or was a director or officer of the Company; (ii) the fact that any action taken by Indemnitee (or a failure to take action by Indemnitee) or of any action (or failure to act) on Indemnitee's part while acting as an Agent; or (iii) the fact that Indemnitee is or was serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan, or other enterprise, and in any such case described above, whether or not serving in any such capacity at the time any liability or Expense is incurred for which indemnification, reimbursement, or advancement of Expenses may be provided under this Agreement. If Independent Counsel selected by Indemnitee reasonably concludes (in writing) that a given situation may lead to or culminate in the institution of a proceeding, this shall be considered a proceeding under this paragraph.

(g) Subsidiary. For purposes of this Agreement, the term "***subsidiary***" means any corporation, limited liability company, or other entity, of which more than 50% of the outstanding voting securities or equity interests are owned, directly or indirectly, by the Company and one or more of its subsidiaries, and any other corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other enterprise of which Indemnitee is or was serving at the request of the Company as an Agent.

(h) Voting Securities. For purposes of this Agreement, "***Voting Securities***" shall mean any securities of the Company that vote generally in the election of directors.

2. Agreement to Serve. Indemnitee will serve, or continue to serve, as the case may be, as an Agent, faithfully and to the best of his or her ability, at the will of such entity designated by the Company and at the request of the Company (or under separate agreement, if such agreement exists), in the capacity Indemnitee currently serves such entity, so long as Indemnitee is duly appointed or elected and qualified in accordance with the applicable provisions of the governance documents of such entity, or until such time as Indemnitee tenders his or her resignation in writing; provided, however, that nothing contained in this Agreement is intended as an employment agreement between Indemnitee and the Company or any of its subsidiaries or to create any right to continued employment of Indemnitee with the Company or any of its subsidiaries in any capacity.

The Company acknowledges that it has entered into this Agreement and assumes the obligations imposed on it hereby, in addition to and separate from its obligations to Indemnitee under the Bylaws, to induce Indemnitee to serve, or continue to serve, as an Agent, and the Company acknowledges that Indemnitee is relying upon this Agreement in serving as an Agent.

3. Indemnification.

(a) Indemnification in Third Party Proceedings. Subject to the exceptions in Section 10, the Company shall indemnify Indemnitee to the fullest extent permitted by the Code, as the same may be amended from time to time (but, to the fullest extent of the law, only to the extent that such amendment permits Indemnitee to broader indemnification rights than the Code permitted prior to adoption of such amendment), if Indemnitee is a party to or threatened to be made a party to or otherwise involved in any proceeding, other than a proceeding by or in the right of the Company to procure a judgment in its favor, for any and all Expenses and Liabilities (including all interest, assessments and other charges paid or payable in connection with or in respect of such Expenses and Liabilities) incurred by Indemnitee in

connection with the investigation, defense, settlement or appeal of such proceeding, if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in or not opposed to the best interests of the Company and, in the case of a criminal proceeding had no reasonable cause to believe that Indemnitee's conduct was unlawful. The parties hereto intend that this Agreement shall provide to the fullest extent permitted by law for indemnification in excess of that expressly permitted by statute, including, without limitation, any indemnification provided by the Certificate of Incorporation of the Company, the Bylaws, vote of its stockholders or disinterested directors, or applicable law.

(b) Indemnification in Derivative Actions and Direct Actions by the Company. Subject to Section 10 below, the Company shall indemnify Indemnitee to the fullest extent permitted by the Code, as the same may be amended from time to time (but, fullest extent permitted by applicable law, only to the extent that such amendment permits Indemnitee to broader indemnification rights than the Code permitted prior to adoption of such amendment), if Indemnitee is a party to or threatened to be made a party to or otherwise involved in any proceeding by or in the right of the Company to procure a judgment in its favor, against any and all Expenses actually and reasonably incurred by Indemnitee in connection with the investigation, defense, settlement, or appeal of such proceedings, if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in or not opposed to the best interests of the Company. No indemnification for Expenses shall be made under this Section 3(b) in respect of any claim, issue or matter as to which Indemnitee shall have been finally adjudged by a court competent jurisdiction to be liable to the Company, unless and only to the extent that the Chancery Court of the State of Delaware or any court in which the proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to indemnification.

4. Indemnification of Expenses of Successful Party. Notwithstanding any other provision of this Agreement, in circumstances where indemnification is not available under Section 3(a) or 3(b), as the case may be, to the fullest extent permitted by law and to the extent that Indemnitee is a party to (or a participant in) any proceeding and has been successful on the merits or otherwise in defense of any proceeding or in defense of any claim, issue or matter therein, in whole or part, including the dismissal of any action without prejudice, the Company shall indemnify Indemnitee against all Expenses and Liabilities in connection with the investigation, defense or appeal of such proceeding. If Indemnitee is not wholly successful in such proceeding but is successful, on the merits or otherwise, as to one or more but less than all claims, issues or matters in such proceeding, the Company shall indemnify Indemnitee against all Expenses and Liabilities incurred by Indemnitee or on Indemnitee's behalf in connection with or related to each successfully resolved claim, issue or matter to the fullest extent permitted by law.

5. Partial Indemnification; Witness Indemnification. If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of any Expenses and Liabilities incurred by Indemnitee in the investigation, defense, settlement or appeal of a proceeding, but is precluded by applicable law or the specific terms of this Agreement to indemnification for the total amount thereof, the Company shall nevertheless indemnify Indemnitee for the portion thereof to which Indemnitee is entitled. Notwithstanding any other provision of this Agreement, to the fullest extent permitted by applicable law and to the extent that Indemnitee is, by reason of Indemnitee's acting as an Agent, a witness or otherwise asked to participate in any proceeding to which Indemnitee is not a party, Indemnitee shall be indemnified against all Expenses incurred by Indemnitee or on Indemnitee's behalf in connection therewith.

6. Advancement of Expenses. To the extent not prohibited by law, the Company shall advance the Expenses incurred by Indemnitee in connection with any proceeding, and such advancement shall be made within twenty (20) days after the receipt by the Company of a statement or statements requesting such advances (which shall include invoices received by Indemnitee in connection with such Expenses

but, in the case of invoices in connection with legal services, any references to legal work performed or to expenditures made that would cause Indemnitee to waive any privilege accorded by applicable law shall not be included with the invoice) and upon request of the Company, an undertaking to repay the advancement of Expenses if and to the extent that it is ultimately determined by a court of competent jurisdiction in a final judgment, not subject to appeal, that Indemnitee is not entitled to be indemnified by the Company. Advances shall be unsecured, interest free and without regard to Indemnitee's ability to repay the Expenses. Advances shall include any and all Expenses incurred by Indemnitee pursuing an action to enforce Indemnitee's right to indemnification under this Agreement or otherwise and this right of advancement, including expenses incurred preparing and forwarding statements to the Company to support the advances claimed. Indemnitee acknowledges that the execution and delivery of this Agreement shall constitute an undertaking providing that Indemnitee shall, to the fullest extent required by law, repay the advance (without interest) if and to the extent that it is ultimately determined by a court of competent jurisdiction in a final judgment, not subject to appeal, that Indemnitee is not entitled to be indemnified by the Company. The right to advances under this Section shall continue until final disposition of any proceeding, including any appeal therein. This Section 6 shall not apply to any claim made by Indemnitee for which indemnity is excluded pursuant to Section 10(b).

7. Notice and Other Indemnification Procedures.

(a) Notification of Proceeding. Indemnitee will notify the Company in writing promptly upon being served with any summons, citation, subpoena, complaint, indictment, information or other document relating to any proceeding or matter which may be subject to indemnification or advancement of Expenses covered hereunder. The written notification to the Company shall include a description of the nature of the proceeding and the facts underlying the proceeding. The failure of Indemnitee to so notify the Company shall not relieve the Company of any obligation which it may have to Indemnitee under this Agreement or otherwise and any delay in so notifying the Company shall not constitute a waiver by Indemnitee of any rights under this Agreement.

(b) Request for Indemnification Payments. To obtain indemnification under this Agreement, Indemnitee shall submit to the Company a written request, including therein or therewith such documentation and information as is reasonably available to Indemnitee and is reasonably necessary to determine whether and to what extent Indemnitee is entitled to indemnification under the terms of this Agreement, and shall request payment thereof by the Company.

(c) Determination of Right to Indemnification Payments. Upon written request by Indemnitee for indemnification pursuant to the Section 7(b) hereof, a determination with respect to Indemnitee's entitlement thereto shall be made in the specific case by one of the following four methods, which shall be at the election of the Board of Directors: (1) by a majority vote of the disinterested directors, even though less than a quorum, (2) by a committee of disinterested directors designated by a majority vote of the disinterested directors, even though less than a quorum, (3) if there are no disinterested directors or if the disinterested directors so direct, by Independent Counsel in a written opinion to the Board of Directors, a copy of which shall be delivered to the Indemnitee, or (4) if so directed by the Board of Directors, by the stockholders of the Company; *provided, however*, that if there has been a Change in Control, then such determination shall be made by Independent Counsel selected by Indemnitee and approved by the Company (which approval shall not be unreasonably withheld). For purposes hereof, disinterested directors are those members of the board of directors of the Company who are not parties to the action, suit or proceeding in respect of which indemnification is sought by Indemnitee. Indemnification payments requested by Indemnitee under Section 3 hereof shall be made by the Company no later than forty five (45) days after receipt of the written request of Indemnitee. Claims for advancement of Expenses shall be made under the provisions of Section 6 herein.

(d) Application for Enforcement. In the event the Company fails to make timely payments as set forth in Sections 6 or 7(b) above, Indemnitee shall have the right to apply to any court of competent jurisdiction for the purpose of enforcing Indemnitee's right to indemnification or advancement of Expenses pursuant to this Agreement. In such an enforcement hearing or proceeding, the burden of proof shall be on the Company to prove that indemnification or advancement of Expenses to Indemnitee is not required under this Agreement or permitted by applicable law. Any determination by the Company (including its Board of Directors, a committee thereof, Independent Counsel) or stockholders of the Company, that Indemnitee is not entitled to indemnification hereunder, shall not be a defense by the Company to the action nor create any presumption that Indemnitee is not entitled to indemnification or advancement of Expenses hereunder.

(e) Indemnification of Certain Expenses. The Company shall indemnify Indemnitee against all Expenses incurred in connection with any hearing or proceeding under this Section 7 unless the Company prevails in such hearing or proceeding on the merits in all material respects.

8. Assumption of Defense. In the event the Company shall be requested by Indemnitee to pay the Expenses of any proceeding, the Company, if appropriate, shall be entitled to assume the defense of such proceeding, or to participate to the extent permissible in such proceeding, with counsel reasonably acceptable to Indemnitee. Upon assumption of the defense by the Company and the retention of such counsel by the Company, the Company shall not be liable to Indemnitee under this Agreement for any fees of counsel subsequently incurred by Indemnitee with respect to the same proceeding, provided that Indemnitee shall have the right to employ separate counsel in such proceeding at Indemnitee's sole cost and expense. Notwithstanding the foregoing, if Indemnitee's counsel delivers a written notice to the Company stating that such counsel has reasonably concluded that there may be a conflict of interest between the Company and Indemnitee in the conduct of any such defense or the Company shall not, in fact, have employed counsel or otherwise actively pursued the defense of such proceeding within a reasonable time, then in any such event the fees and Expenses of Indemnitee's counsel to defend such proceeding shall be subject to the indemnification and advancement of Expenses provisions of this Agreement.

9. Insurance. To the extent that the Company maintains an insurance policy or policies providing liability insurance for Agents ("***D&O Insurance***"), Indemnitee shall be covered by such policy or policies in accordance with its or their terms to the maximum extent of the coverage available for any such Agent under such policy or policies. If, at the time of the receipt of a notice of a claim pursuant to the terms hereof, the Company has D&O Insurance in effect or otherwise potentially available, the Company shall give prompt notice of the commencement of such proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of Indemnitee, all amounts payable as a result of such proceeding in accordance with the terms of such policies.

10. Exceptions.

(a) Certain Matters. Any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify Indemnitee on account of any proceeding with respect to: (i) remuneration paid to Indemnitee if it is determined by final judgment or other final adjudication that such remuneration was in violation of law (and, in this respect, both the Company and Indemnitee have been advised that the Securities and Exchange Commission believes that indemnification for liabilities arising under the federal securities laws is against public policy and is, therefore, unenforceable and that claims for indemnification should be submitted to appropriate courts for adjudication, as indicated in Section 10(d) below); (ii) a final judgment rendered against Indemnitee for an accounting, disgorgement or repayment of profits made from the purchase or sale by Indemnitee of

securities of the Company against Indemnitee or in connection with a settlement by or on behalf of Indemnitee to the extent it is acknowledged by Indemnitee and the Company that such amount paid in settlement resulted from Indemnitee's conduct from which Indemnitee received monetary personal profit, pursuant to the provisions of Section 16(b) of the Exchange Act or other provisions of any federal, state or local statute or rules and regulations thereunder; (iii) a final judgment or other final adjudication that Indemnitee's conduct was in bad faith, knowingly fraudulent or deliberately dishonest or constituted willful misconduct (but only to the extent of such specific determination); or (iv) on account of conduct that is established by a final judgment as constituting a breach of Indemnitee's duty of loyalty to the Company or resulting in any personal profit or advantage to which Indemnitee is not legally entitled. For purposes of the foregoing sentence, a final judgment or other adjudication may be reached in either the underlying proceeding or action in connection with which indemnification is sought or a separate proceeding or action to establish rights and liabilities under this Agreement.

(b) Claims Initiated by Indemnitee. Any provision herein to the contrary notwithstanding, the Company shall not be obligated to indemnify or advance Expenses to Indemnitee with respect to proceedings or claims initiated or brought by Indemnitee against the Company or its Agents and not by way of defense, except (i) with respect to proceedings brought to establish or enforce a right to indemnification or advancement under this Agreement or under any other agreement, provision in the Bylaws or the Certificate of Incorporation or applicable law, or (ii) with respect to any other proceeding initiated by Indemnitee that is either approved by the Board of Directors or Indemnitee's participation is required by applicable law. However, indemnification or advancement of Expenses may be provided by the Company in specific cases if the Board of Directors determines it to be appropriate.

(c) Unauthorized Settlements. Any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify Indemnitee under this Agreement for any amounts paid in settlement of a proceeding effected without the Company's written consent. Neither the Company nor Indemnitee shall unreasonably withhold consent to any proposed settlement; provided, however, that the Company may in any event decline to consent to (or to otherwise admit or agree to any liability for indemnification hereunder in respect of) any proposed settlement if the Company is also a party in such proceeding and determines in good faith that such settlement is not in the best interests of the Company and its stockholders.

(d) Securities Act Liabilities. Any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify Indemnitee or otherwise act in violation of any undertaking appearing in and required by the rules and regulations promulgated under the Securities Act of 1933, as amended (the "***Securities Act***"), or in any registration statement filed with the SEC under the Securities Act. Indemnitee acknowledges that paragraph (h) of Item 512 of Regulation S-K currently generally requires the Company to undertake in connection with any registration statement filed under the Securities Act to submit the issue of the enforceability of Indemnitee's rights under this Agreement in connection with any liability under the Securities Act on public policy grounds to a court of appropriate jurisdiction and to be governed by any final adjudication of such issue. Indemnitee specifically agrees that any such undertaking shall supersede the provisions of this Agreement and to be bound by any such undertaking.

(e) Prior Payments Any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify or advance Expenses to Indemnitee under this Agreement for which payment has actually been made to or on behalf of Indemnitee under any insurance policy or other indemnity provision, expect with respect to any excess beyond the amount paid under any insurance policy or indemnity policy.

11. Nonexclusivity and Survival of Rights. The provisions for indemnification and advancement of Expenses set forth in this Agreement shall not be deemed exclusive of any other rights which Indemnitee may at any time be entitled under any provision of applicable law, the Company's Certificate of Incorporation, the Bylaws or other agreements, both as to action in Indemnitee's official capacity and Indemnitee's action as an Agent, in any court in which a proceeding is brought, and Indemnitee's rights hereunder shall continue after Indemnitee has ceased acting as an Agent and shall inure to the benefit of the heirs, executors, administrators and assigns of Indemnitee. The obligations and duties of the Company to Indemnitee under this Agreement shall be binding on the Company and its successors and assigns until terminated in accordance with its terms. The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business or assets of the Company, expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place.

No amendment, alteration or repeal of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee in his or her corporate status prior to such amendment, alteration or repeal. To the extent that a change in the Code, whether by statute or judicial decision, permits greater indemnification or advancement of Expenses than would be afforded currently under the Company's Certificate of Incorporation, the Bylaws and this Agreement, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy shall be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, by Indemnitee shall not prevent the concurrent assertion or employment of any other right or remedy by Indemnitee.

12. Term. This Agreement shall continue until and terminate upon the later of: (a) seven (7) years after the date that Indemnitee shall have ceased to serve as an Agent; or (b) one (1) year after the final termination of any proceeding, including any appeal then pending, in respect to which Indemnitee was granted rights of indemnification or advancement of Expenses hereunder.

No legal action shall be brought and no cause of action shall be asserted by or in the right of the Company against an Indemnitee or an Indemnitee's estate, spouse, heirs, executors or personal or legal representatives after the expiration of seven (7) years from the date of accrual of such cause of action, and any claim or cause of action of the Company shall be extinguished and deemed released unless asserted by the timely filing of a legal action within such seven-year period; provided, however, that if any shorter period of limitations is otherwise applicable to such cause of action, such shorter period shall govern.

13. Subrogation. In the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee, who, at the request and expense of the Company, shall execute all papers required and shall do everything that may be reasonably necessary to secure such rights, including the execution of such documents necessary to enable the Company effectively to bring suit to enforce such rights.

14. Interpretation of Agreement. It is understood that the parties hereto intend this Agreement to be interpreted and enforced so as to provide indemnification and advancement of Expenses to Indemnitee to the fullest extent now or hereafter permitted by law.

15. Severability. If any provision of this Agreement shall be held to be invalid, illegal or unenforceable for any reason whatsoever, (a) the validity, legality and enforceability of the remaining provisions of the Agreement (including without limitation, all portions of any paragraphs of this

Agreement containing any such provision held to be invalid, illegal or unenforceable, that are not themselves invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby; and (b) to the fullest extent possible, the provisions of this Agreement (including, without limitation, all portions of any paragraph of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that are not themselves invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable and to give effect to Section 14 hereof.

16. Amendment and Waiver. No supplement, modification, amendment, or cancellation of this Agreement shall be binding unless executed in writing by the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (whether or not similar) nor shall such waiver constitute a continuing waiver.

18. Notice. Except as otherwise provided herein, any notice or demand which, by the provisions hereof, is required or which may be given to or served upon the parties hereto shall be in writing and, if by electronic transmission, shall be deemed to have been validly served, given or delivered when sent, if by overnight delivery, courier or personal delivery, shall be deemed to have been validly served, given or delivered upon actual delivery and, if mailed, shall be deemed to have been validly served, given or delivered three (3) business days after deposit in the United States mail, as registered or certified mail, with proper postage prepaid and addressed to the party or parties to be notified at the addresses set forth on the signature page of this Agreement (or such other address(es) as a party may designate for itself by like notice). If to the Company, notices and demands shall be delivered to the attention of the Secretary of the Company.

19. Governing Law. This Agreement shall be governed exclusively by and construed according to the laws of the State of Delaware, as applied to contracts between Delaware residents entered into and to be performed entirely within Delaware.

20. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall for all purposes be deemed to be an original but all of which together shall constitute but one and the same Agreement. Only one such counterpart need be produced to evidence the existence of this Agreement.

21. Headings. The headings of the sections of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction hereof.

22. Entire Agreement. Subject to Section 11 hereof, this Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements, understandings and negotiations, written and oral, between the parties with respect to the subject matter of this Agreement; provided, however, that this Agreement is a supplement to and in furtherance of the Company's Certificate of Incorporation, the Bylaws, the Code and any other applicable law, and shall not be deemed a substitute therefor, and does not diminish or abrogate any rights of Indemnitee thereunder.

23. Contribution. To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Company, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by Indemnitee, whether for judgments, fines, penalties, excise taxes, amounts paid or to be paid in settlement and/or for Expenses, in connection with any claim relating to an indemnifiable event under this Agreement, in such proportion as is deemed fair and reasonable in light of all of the circumstances of such proceeding in order to reflect (i) the relative benefits received by the Company and Indemnitee as a result of the event(s) and/or

transaction(s) giving cause to such proceeding; and/or (ii) the relative fault of the Company and Indemnitee in connection with such event(s) and/or transaction(s).

24. Consent to Jurisdiction. The Company and Indemnitee hereby irrevocably and unconditionally (i) agree that any action or proceeding arising out of or in connection with this Agreement shall be brought only in the Chancery Court of the State of Delaware (the "***Delaware Court***"), and not in any other state or federal court in the United States of America or any court in any other country, (ii) consent to submit to the exclusive jurisdiction of the Delaware Court for purposes of any action or proceeding arising out of or in connection with this Agreement, (iii) agree to appoint, to the extent such party is not otherwise subject to service of process in the State of Delaware, an agent in the State of Delaware as such party's agent for acceptance of legal process in connection with any such action or proceeding against such party with the same legal force and validity as if served upon such party personally within the State of Delaware, (iv) waive any objection to the laying of venue of any such action or proceeding in the Delaware Court, and (v) waive, and agree not to plead or to make, any claim that any such action or proceeding brought in the Delaware Court has been brought in an improper or inconvenient forum.

IN WITNESS WHEREOF, the parties hereto have entered into this Agreement effective as of the date first above written.

MAIA BIOTECHNOLOGY, INC.

By: _____

Name: _____

Title: _____

INDEMNITEE

_____

Signature of Indemnitee

_____

Print or Type Name of Indemnitee

Exhibit 10.8

MAIA BIOTECHNOLOGY, INC.

2018 Stock Option Plan

1. **Purpose**. The purpose of this Plan is to promote share ownership by key employees, Directors and consultants of MAIA Biotechnology, Inc., a Delaware corporation, and its Subsidiaries, thereby reinforcing a mutuality of interest with other stockholders, and to enable the Company and the Subsidiaries to attract, retain and motivate key employees, Directors and consultants by permitting them to share in its growth.

2. **Definitions**. As used in this Plan,

"Affiliate" means, with respect to a Person, a Person that directly or indirectly Controls, or is Controlled by, or is under common Control with such Person.

"Award" means a grant of Options pursuant to the provisions of the Plan.

"Board" means the Board of Directors of the Company and, to the extent of any delegation by the Board to a committee (or subcommittee thereof) pursuant to Section 12 of this Plan, such committee (or subcommittee).

"Cause" means (i) conviction of, or the entry of a plea of guilty or no contest to, a felony or any other crime that causes the Company or its Affiliates public disgrace or disrepute, or materially and adversely affects the Company's or its Affiliates' operations or financial performance or the relationship the Company has with its customers, (ii) gross negligence or willful misconduct with respect to the Company or any of its Affiliates, including, without limitation fraud, embezzlement, theft or proven dishonesty in the course of his or her employment; (iii) alcohol abuse or use of controlled drugs other than in accordance with a physician's prescription; (iv) refusal to perform any lawful, material obligation or fulfill any duty (other than any duty or obligation of the type described in clause (vi) below) to the Company or its Affiliates (other than due to a Disability), which refusal, if curable, is not cured within 15 days after delivery of written notice thereof; (v) material breach of any agreement with or duty owed to the Company or any of its Affiliates, which breach, if curable, is not cured within 15 days after the delivery of written notice thereof; or (vi) any breach of any obligation or duty to the Company or any of its Affiliates (whether arising by statute, common law or agreement) relating to confidentiality, noncompetition, nonsolicitation or proprietary rights. Notwithstanding the foregoing, if a Participant and the Company (or any of its Affiliates) have entered into an employment agreement, consulting agreement or other similar agreement that specifically defines "cause," then with respect to such Participant, "Cause" shall have the meaning defined in that employment agreement, consulting agreement or other agreement.

"Change in Control" means a "Deemed Liquidation Event" as such term is defined in the Company's certificate of incorporation (as in effect from time to time), or if such term is not defined in the Company's certificate of incorporation, then it shall mean, unless otherwise defined in an Award agreement, the occurrence of any one or more of the following: (i) the sale of all of the outstanding equity interests of the Company to an unrelated person or entity; (ii) the sale of all or substantially all of the assets of the Company on a consolidated basis to an unrelated person or entity; (iii) a merger, reorganization or consolidation after which the holders of the voting stock of the Company immediately prior to such transaction (and their related persons or entities) own less than fifty percent (50%) of the outstanding voting power of the surviving or resulting entity immediately upon completion of such transaction; or (iv) the dissolution or liquidation of the Company.

"Code" means the Internal Revenue Code of 1986, as amended from time to time, and any successor thereto.

"Control" means, as to any Person, the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise (the terms "Controlled by" and "under common Control with" shall have correlative meanings).

"Company" means MAIA Biotechnology, Inc., a Delaware corporation, and any successor thereto.

"Date of Grant" means the date as of which an Option is determined to be effective and designated in a resolution by the Board. The Date of Grant shall not be earlier than the date of the resolution and action therein by the Board.

"Director" means a member of the Board.

"Disability" means a condition rendering a Participant Disabled.

"Disabled" with respect to a particular Participant will have the same meaning as set forth in any long-term disability policy or program sponsored by the Company or any Subsidiary covering such Participant, as in effect as of the date of such determination, or if no such policy or program shall be in effect, "Disabled" will have the meaning as set forth in Section 22(e)(3) of the Code.

"Fair Market Value" means, as of any given day, the amount determined in good faith by the Board to be the fair market value of a Share on such day (which determination shall, to the extent applicable, be made in a manner that complies with Section 409A of the Code), and such determination shall be conclusive and binding for all purposes.

"Incentive Stock Options" means Options that are intended to qualify as "incentive stock options" under Section 422 of the Code or any successor provision.

"Initial Public Offering" means the first public offering of the Company's equity securities registered under the Securities Act of 1933, as amended, or any successor statute, or such other event as a result of which outstanding equity securities of the Company (or any successor entity) shall be publicly traded.

"Nonqualified Stock Option" means an Option that is not intended to meet the requirements of Section 422 of the Code or otherwise does not meet such requirements.

"Option" means the right to purchase Shares upon exercise of an option granted pursuant to Section 4 of this Plan.

"Option Price" means the purchase price per Option Share payable on exercise of an Option.

"Option Shares" means Shares acquired upon the exercise of an Option.

"Participant" means a person who is selected by the Board to receive benefits under this Plan and who is at the time an employee, Director, advisor, or consultant of the Company or a Subsidiary.

"Person" means an individual, partnership, corporation, limited liability company, trust, joint venture, unincorporated association, or other entity or association.

"Plan" means this 2018 Stock Option Plan, as amended from time to time.

"Repurchase Right" means the Company's right to repurchase Option Shares as set forth in Section 5 of this Plan.

"Right of First Refusal" means the Company's right of first refusal as set forth in Section 6 of this Plan.

"Shares" means shares of the common stock, $0.0001 par value, of the Company or any security into which such shares may be changed by reason of any transaction or event of the type referred to in Section 7.

"Stockholder Agreement" means any stockholders' agreement (including, but not limited to, the Company's Bylaws and Certificate of Incorporation, if and as applicable, and as from time to time in effect) by and among, or otherwise binding, the Company and certain stockholders and/or one or more agreements among the Company, a Participant (or such Participant's estate, heirs or beneficiaries) and other parties thereto in such form determined from time to time by the Company in its sole discretion, that include terms and conditions that provide the Company and/or other stockholders with (i) a right of first refusal or impose other restrictions with respect to the transfer of Shares, (ii) a voting agreement with respect to Shares, (iii) "drag-along" rights in favor of the stockholders owning a specified threshold of Shares, (iv) "market standoff" or "lock-up" conditions, and

(i) such other reasonable terms and conditions as the Board may require, if any.

"Stock Option Agreement" means the agreement entered into by the Company and Participant pursuant to Section 8 of this Plan.

"Subsidiary" means any corporation, company or other entity (i) more than 50 percent of whose outstanding shares or securities (representing the right to vote for the election of directors or other managing authority) are, or (ii) which does not have outstanding shares or securities (as may be the case in a partnership, joint venture, limited liability company or unincorporated association), but more than 50 percent of whose ownership interest representing the right generally to make decisions for such other entity is, now or hereafter, owned or controlled, directly or indirectly, by the Company.

"Ten Percent Stockholder" shall mean any Participant who owns more than 10% of the combined voting power of all classes of stock of the Company, within the meaning of Section 422 of the Code.

3. **Shares Available.** Subject to adjustment as provided in Section 7 of this Plan, the total number of Shares which may be issued and sold under Options granted pursuant to this Plan shall not exceed 3,900,000 Shares, any or all of which may be issued under Incentive Stock Options. Such shares may be treasury shares or shares of original issue or a combination of the foregoing.

4. **Options**. The Board may, from time to time and upon such terms and conditions as it may determine, authorize the granting of Options to Participants. Each such grant shall be subject to all of the requirements contained in the following provisions and such other terms as the Board shall determine:

(a) Each grant shall specify the number of Shares to which it pertains and shall separately designate whether the Options are intended to be Incentive Stock Options, Nonqualified Stock Options, or a combination of the foregoing.

(b) Each grant shall specify an Option Price, which shall be at least equal to the Fair Market Value of a Share on the Date of Grant. In the case of an Incentive Stock Option granted to a Ten Percent Stockholder, the Option Price shall be at least equal to one hundred ten percent (110%) of the Fair Market Value of a Share on the Date of Grant.

(c) The Option Price shall be payable (i) in cash or by other consideration acceptable to the Company, (ii) by the actual or constructive transfer to the Company of Shares owned by the Participant having a Fair Market Value at the time of exercise equal to the total Option Price, (iii) by a combination of such methods of payment, or (iv) any other method approved or accepted by the Board in its sole discretion, including, if the Board so determines, a cashless exercise that complies with all applicable laws.

(d) (i) Each grant shall specify the period or periods of continuous service by the Participant with the Company or any of its Subsidiaries that is necessary before the Options or installments thereof will become exercisable and may provide for earlier exercise of the Option, including, without limitation, in the event of a Change in Control or similar event. Any grant may specify performance conditions that must be satisfied as a condition to the exercise or early exercise of the Option.

(i) Notwithstanding the foregoing, any grant of Options may provide for the immediate exercisability of the Options, subject to the additional restrictions described in this paragraph (d)(ii). Option Shares so acquired may not be transferred, sold, pledged, exchanged, assigned or otherwise encumbered or disposed of by the Optionee, except to the Company, until they have become vested in accordance with a vesting schedule set forth in the agreement evidencing the grant. Should the Optionee terminate service while holding Option Shares that have not become vested, the Company shall have the right to repurchase, at the Option Price paid per share, any or all of those unvested Option Shares. The terms upon which such repurchase right shall be exercisable (including the period and procedure for exercise and the appropriate vesting schedule for the purchased shares) shall be established by the Board and set forth in the document evidencing such repurchase right. Unless otherwise directed by the Board, all certificates representing unvested Option Shares shall be held in custody by the Company until all restrictions thereon have lapsed, together with a stock power or powers, executed by the Optionee in whose name such certificates are registered, endorsed in blank and covering such Option Shares. The repurchase rights described in this paragraph (d)(ii) shall be in addition to the Repurchase Right described in Section 5 of this Plan.

(e) Unless otherwise approved by the Board, each Option shall be subject to the Repurchase Right and the Right of First Refusal in favor of the Company as specified in Sections 5 and 6 of this Plan, respectively.

(f) Except as otherwise determined by the Board, no Option shall be transferable by the Participant except by will or the laws of descent and distribution. Except as otherwise determined by the Board, Options shall be exercisable during the Participant's lifetime only by the Participant or, in the event of the Participant's legal incapacity to do so, the Participant's guardian or legal representative acting on behalf of the Participant in a fiduciary capacity under state law and court supervision.

(g) No Option shall be exercisable more than 10 years after the Date of Grant. In the case of an Incentive Stock Option granted to a Ten Percent Stockholder, the Incentive Stock Option shall not be exercisable later than 7 years after its Date of Grant.

(h) A Participant may exercise an Option in whole or in part at any time and from time to time during the period within which an Option may be exercised. To exercise an Option, a Participant shall give written notice to the Company specifying the number of Shares to be purchased and provide payment of the Option Price and any other documentation that may be required by the Company.

(i) A Participant shall be treated for all purposes as the owner of record of the number of Shares purchased pursuant to exercise of the Option (in whole or in part) as of the date such Shares are issued following the complete and valid satisfaction of the conditions set forth in Section 4(h).

(j) To the extent required for Incentive Stock Option status under Section 422 of the Code, the aggregate Fair Market Value (determined as of the Date of Grant) of the Shares with respect to which Incentive Stock Options are exercisable for the first time by the Participant during any calendar year under the Plan and/or any other stock option plan of the Company (within the meaning of Section 424 of the Code) shall not exceed $1,000,000. To the extent any Option granted under the Plan which is intended to be an Incentive Stock Option exceeds the limitation set forth above in this Section 4(j), such Option shall be treated as a Nonqualified Stock Option.

(k) Notwithstanding the foregoing provisions of this Section 4, Incentive Stock Options may be granted only to eligible Participants who are "employees" (as defined in Section 3401(c) of the Code) of the Company, or a "parent" or "subsidiary" of the Company (each as defined in Section 424(e) and (f) of the Code). Eligible Participants who are employees of a Subsidiary may be granted Options under the Plan only if the Subsidiary qualifies as an "eligible issuer of service recipient stock" within the meaning of Section 409A of the Code.

(i) Termination of Service.

(ii) Notwithstanding anything to the contrary set forth in the Plan, if a Participant's service with the Company or any Subsidiaries is terminated for Cause: (i) any Option not already exercised will be immediately and automatically forfeited as of the date of such termination without consideration therefor, and (ii) any Option Shares for which the Company has not yet delivered share certificates will be immediately and automatically forfeited and the Company will refund to the Participant the Option Price paid for such Option Shares, if any.

(iii) If a Participant's service with the Company or any of its Subsidiaries terminates by reason of death, any Option held by such Participant may thereafter be exercised, to the extent then exercisable or on such accelerated basis as the Board may determine, at or after grant, by the legal representative of the estate or by the legatee of the Participant under the will of the Participant, for a period expiring (1) at such time as may be specified by the Board at or after the time of grant (which, in the event that the Participant resides in the State of California, shall be no less than 6 months from the date of termination), (2) if not specified by the Board, then 12 months from the date of death, or (3) if sooner than the applicable period specified under (1) or (2) above, then upon the expiration of the stated term of such Option.

(iv) If a Participant's service with the Company or any of its Subsidiaries terminates by reason of Disability, any Option held by such Participant may thereafter be exercised by the Participant or his or her personal representative, to the extent it was exercisable at the time of termination, or on such accelerated basis as the Board may determine at or after grant, for a period expiring (1) at such time as may be specified by the Board at or after the time of grant (which, in the event that the Participant resides in the State of California, shall be no less than 6 months from the date of termination), (2) if not specified by the Board, then 12 months from the date of termination of service, or (3) if sooner than the applicable period specified under (1) or (2) above, then upon the expiration of the stated term of such Option.

(v) If a Participant's service with the Company or any Subsidiary terminates for any reason other than death, Disability or Cause, any Option held by such Participant may thereafter be exercised by the Participant, to the extent it was exercisable at the time of such termination, or on such accelerated basis as the Board may determine at or after grant, for a period expiring (1) at such time as may be specified by the Board at or after the time of grant (which, in the event that the Participant resides in the State of California, shall be no less than 30 days from the date of termination), (2) if not specified by the Board, then 90 days from the date of termination of service, or (3) if sooner than the applicable period specified under (1) or (2) above, then upon the expiration of the stated term of such Option.

5. Company's Repurchase Right.

(a) The Company shall have the right to repurchase some or all of the Option Shares of a Participant upon the occurrence of any of the events specified in Section 5(b) below (the "Repurchase Event"). The Repurchase Right may be exercised by the Company within 180 days following the date of such event (the "Repurchase Period"). The Repurchase Right shall be exercised by the Company by giving the holder written notice on or before the last day of the Repurchase Period of its intention to exercise the Repurchase Right, and, together with such notice, tendering to the holder an amount equal to the Fair Market Value of the Option Shares, as provided in Section 5(c); provided, however, that if the Repurchase Event was the termination of Participant's employment or other service with the Company and its Subsidiaries for Cause, the amount payable on exercise of the Repurchase Right shall equal the lesser of Fair Market Value of the Option Shares and the Option Price the Participant had paid for the exercise of the Option Shares. The Company may assign the Repurchase Right to one or more persons. Upon exercise of the Repurchase Right in the manner provided in this Section 5(a), the Participant shall promptly deliver to the Company the stock certificate or certificates representing the Option Shares being repurchased, duly endorsed and free and clear of any and all liens, charges and encumbrances. Upon the Company's receipt of the certificates from the Participant (or at such later date as is determined to be necessary by the Board to avoid any breach by the Company of any agreement to which it is a party), the Company shall deliver to the Participant a check for the purchase price of the Option Shares being purchased; provided, however, that the Company may pay the purchase price for such Option Shares by offsetting and canceling any indebtedness then owed by the Participant to the Company. If Option Shares are not purchased under the Repurchase Right, the Participant and his or her successor in interest, if any, will hold any such shares in his or her possession subject to all of the provisions of this Section 5 and Section 6 hereof. The Repurchase Right described in this Section 5 of the Plan shall be in addition to the rights of the Company described in Section 4(d)(ii) of the Plan.

(b) **Company's Right to Exercise Repurchase Right.** The Company shall have the Repurchase Right in the event that any of the following events shall occur:

(i) The termination of the Participant's employment or other service with the Company and its Subsidiaries for any reason whatsoever, regardless of the circumstances thereof, and including without limitation upon death, disability, retirement, discharge or resignation for any reason, whether voluntary or involuntarily; or

(ii) The (x) filing of a voluntary petition under any bankruptcy or insolvency law, or a petition for the appointment of a receiver or the making of an assignment for the benefit of creditors, with respect to the Participant, or (y) the Participant being subjected involuntarily to a petition or assignment or to an attachment or other legal or equitable interest with respect to his or her assets, which involuntary petition or assignment or attachment is not discharged within 60 days after its date or (z) the Participant being subject to a transfer of Option Shares by operation of law, except by reason of death.

(c) **Determination of Fair Market Value.** For purposes of this Section 5, the Fair Market Value of the Option Shares shall be determined by the Board as of a date no more than 90 days prior to the date on which the Company provides written notice (pursuant to Section 5(a)) of its exercise of the Repurchase Right.

(d) **Expiration of Company's Repurchase Right.** The Repurchase Right of the Company set forth in this Section 5 of the Plan shall remain in effect until the closing of an Initial Public Offering.

(e) **Other Company Documents.** Notwithstanding the provisions of this Section 5 or this Plan in general, the repurchase rights set forth herein shall be superseded by any similar or comparable rights or provisions to which the Participant is subject or made subject under or by any other Company agreement, instrument or document.

6. **Company's Right of First Refusal.**

(a) **Exercise of Right.** If at a time other than within the period specified in Section 5(a) the Participant desires to transfer all or any part of the Option Shares to any person other than the Company (an "Offeror"), the Participant shall: (i) obtain in writing an arms' length, bona fide offer, subject only to customary (if any) closing conditions (the "Offer"), for the purchase thereof from the Offeror; and (ii) give written notice (the "Option Notice") to the Company setting forth the Participant's desire to transfer such shares, which Option Notice shall be accompanied by a photocopy of the Offer and shall set forth the name and address of the Offeror and the price and terms of the Offer. Upon receipt of the Option Notice, the Company shall have an assignable option to purchase any or all of such Option Shares (the "Company Option Shares") specified in the Option Notice, such option to be exercisable by giving, within 10 days after receipt of the Option Notice, a written counter notice to the Participant. If the Company elects to purchase any or all of such Company Option Shares, it shall be obligated to purchase, and the Participant shall be obligated to sell to the Company, such Company Option Shares at the price and terms indicated in the Offer within 30 days from the date of delivery by the Company of such counter notice.

(b) **Sale of Option Shares to Offeror.** The Participant may, for 60 days after the expiration of the 10-day option period as set forth in Section 6(a), sell to the Offeror, pursuant to the terms of the Offer, any or all of such Company Option Shares not purchased or agreed to be purchased by the Company or its assignee. If any or all of such Company Option Shares are not sold pursuant to an Offer within the time permitted above, the unsold Company Option Shares shall remain subject to the terms of this Section 6.

(c) **Adjustments for Changes in Capital Structure.** If there shall be any change in the Shares of the Company through merger, consolidation, reorganization, recapitalization, stock dividend, stock split, combination or exchange of shares, or the like, the restrictions contained in this Section 6 shall apply with equal force to additional and/or substitute securities, if any, received by the Participant in exchange for, or by virtue of his or her ownership of, Option Shares.

(d) **Failure to Deliver Option Shares.** If the Participant fails or refuses to deliver on a timely basis duly endorsed certificates representing Company Option Shares to be sold to the Company or its assignee pursuant to this Section 6, the Company shall have the right to deposit the purchase price for such Company Option Shares in a special account with any bank or trust company, giving notice of such deposit to the Participant, whereupon such Company Option Shares shall be deemed to have been purchased by the Company. All such monies shall be held by the bank or trust company for the benefit of the Participant. All monies deposited with the bank or trust company but remaining unclaimed for two years after the date of deposit shall be repaid by the bank or trust company to the Company on demand, and the Participant shall thereafter look only to the Company for payment. The Company may place a legend on any certificate for Option Shares delivered to the Participant reflecting the restrictions on transfer provided in this Section 6.

(e) **Expiration of Company's Right of First Refusal.** The first refusal rights of the Company set forth above shall remain in effect until the closing of an Initial Public Offering.

(f) **Other Company Documents.** Notwithstanding the provisions of this Section 6 or this Plan in general, the rights of first refusal set forth herein shall be superseded by any similar or comparable rights or provisions to which the Participant is subject or made subject under or by any other Company agreement, instrument or document.

7. **Adjustments**. The Board shall make or provide for such adjustments in the Option Price and in the number or kind of shares or other securities covered by outstanding Options as the Board in its sole discretion determines to be equitably required in order to prevent dilution or enlargement of the rights of Participants that would otherwise result from any (a) stock dividend, stock split, combination of shares, recapitalization or other change in the capital structure of the Company, (b) merger, consolidation, separation, reorganization, partial or complete liquidation, issuance of rights or warrants to purchase stock, or (c) other corporate transaction or event having an effect similar to any of the foregoing. Moreover, in the event of any such transaction or event, the Board, in its discretion, may provide in substitution for any or all outstanding Options under this Plan such alternative consideration (including cash) as it, in good faith, determines to be equitable in the circumstances and may require in connection therewith the surrender of all Options so replaced. The Board may also make or provide for such adjustments in the number of shares specified in Section 3 of this Plan as the Board in its sole discretion, exercised in good faith, may determine is appropriate to reflect any transaction or event described in this Section 7. Notwithstanding the foregoing, the Board shall not make any adjustment pursuant to this Section 7 that would (i) cause any Option intended to qualify as an Incentive Stock Option to fail to so qualify, (ii) cause an Option that is otherwise exempt from Section 409A of the Code to become subject to Section 409A, or (iii) cause an Option that is subject to Section 409A of the Code to fail to satisfy the requirements of Section 409A.

8. **Stock Option Agreement; Stockholder Agreement**. The form of each Stock Option Agreement shall be prescribed, and any Stock Option Agreement evidencing an outstanding Option may with the concurrence of the affected Participant be amended, by the Board, provided that the terms and conditions of each Stock Option Agreement and amendment are not inconsistent with this Plan and that no amendment shall adversely affect the rights of the Participant with respect to any outstanding Option without the Participant's consent. The Board may require that, upon exercise of any Award granted under the Plan, the Participant shall become party to, or otherwise agree to by bound by, (i) any Stockholder Agreement the Board may require and (ii) any other agreement the Board may require.

9. **Withholding**. No later than the date as of which an amount first becomes includible in the gross income of the Participant for applicable tax purposes with respect to any Option under the Plan, the Participant shall pay to the Company, or make arrangements satisfactory to the Board regarding the payment of, any Federal, state, local, foreign or other taxes of any kind required by law to be withheld with respect to such amount. Unless otherwise determined by the Board, the minimum required withholding obligations may be settled with Shares, including Shares that are part of the award that gives rise to the withholding requirement. The obligations of the Company under this Plan shall be conditional on such payment or arrangements and the Company shall, to the extent permitted by law, have the right to deduct any such taxes from any payment of any kind otherwise due to the Participant.

10. **Governing Law**. The Plan and all Options granted and actions taken thereunder shall be governed by and construed in accordance with the laws of the State of Delaware.

11. **Fractional Shares**. The Company shall not be required to issue any fractional Shares pursuant to this Plan. The Board may provide for the elimination of fractional Shares or for the settlement of fractional Shares for cash.

12. **Administration**. This Plan shall be administered by the Board, which may from time to time delegate all or any part of its authority under this Plan to a committee of not less than two Directors appointed by the Board. To the extent of any such delegation, references in this Plan to the Board shall also refer to the committee. A majority of the members of the committee shall constitute a quorum, and any action taken by a majority of the members of the committee who are present at any meeting of the committee at which a quorum is present, or any actions of the committee that are unanimously approved by the members of the committee in writing, shall be the acts of the committee. Any determination by the Board pursuant to any provision of this Plan shall be final, binding and conclusive. No member of the Board shall be liable for any act, omission, interpretation, construction or determination made in connection with the Plan in good faith, and each member of the Board shall be entitled in all cases to indemnification and reimbursement by the Company in respect of any claim, loss, damage or expense (including without limitation reasonable attorneys' fees) arising or resulting therefrom to the fullest extent permitted by law, indemnification agreement, and/or under any directors' and officers' liability insurance coverage which may be in effect from time to time. The Board shall have no obligation to treat Participants or eligible Participants uniformly, and the Committee may make determinations made under the Plan selectively among Participants who receive or who are eligible to receive Options (whether or not such Participants or eligible Participants are similarly situated). Directors who are eligible for Awards or have received Awards may vote on any matters affecting the administration of the Plan or the grant of Awards, except that no such member will act upon the grant of an Award to himself or herself, but any such member may be counted in determining the existence of a quorum at any meeting of the Board during which action is taken with respect to the grant of Awards to himself or herself.

13. **Lock-Up Agreement**. The Company may, in its discretion, require in connection with an Initial Public Offering that a Participant agree that any Option Share not be sold, offered for sale or otherwise disposed of for a period of time as determined by the Board, provided at least a majority of the Company's Directors and officers who hold Options or Shares at such time are similarly bound.

14. **Foreign Employees**. In order to facilitate the making of any grant or combination of grants under this Plan, the Board may provide for such special terms for awards to Participants who are foreign nationals or who are employed by the Company or any Subsidiary outside of the United States of America as the Board may consider necessary or appropriate to accommodate differences in local law, tax policy or custom. Moreover, the Board may approve such sub-plans or supplements to or amendments, restatements or alternative versions of this Plan as it may consider necessary or appropriate for such purposes, without thereby affecting the terms of this Plan as in effect for any other purpose, and the Secretary or other appropriate officer of the Company may certify any such document as having been approved and adopted in the same manner as this Plan.

15. **Amendment, Etc.**

(a) The Board may at any time and from time to time amend the Plan in whole or in part.

(b) In case of termination of employment or other service by reason of death, Disability or normal or early retirement, or in the case of hardship or other special circumstances, of a Participant who holds an Option not immediately exercisable in full, the Board may, in its sole discretion, accelerate the time at which such Option may be exercised.

(c) This Plan shall not confer upon any Participant any right with respect to continuance of employment or other service with the Company or any Subsidiary, nor shall it interfere in any way with any right the Company or any Subsidiary would otherwise have to terminate such Participant's employment or other service at any time. No individual shall have the right to be selected to receive an Option under the Plan, or, having been so selected, to be selected to receive future Options.

(d) By accepting any benefit under the Plan, each Participant and each person claiming under or through any such Participant shall be conclusively deemed to have indicated their acceptance and ratification of, and consent to, all of the terms and conditions of the Plan and any action taken under the Plan by the Board or the Company, in any case in accordance with the terms and conditions of the Plan.

(e) Notwithstanding anything to the contrary set forth in the Plan, upon or in anticipation of any Change in Control of the Company or any of its Affiliates, the Board may, in its sole and absolute discretion and without the need for the consent of any Participant, take one or more of the following actions contingent upon the occurrence of that Change in Control: (i) cause any or all outstanding Options held by Participants affected by the Change in Control to become vested and immediately exercisable, in whole or in part; (ii) cause any or all outstanding unvested Options held by Participants affected by the Change in Control to be cancelled without consideration therefor; (iii) cancel any Option in exchange for a substitute option in a manner consistent with the requirements of Treas. Reg. §1.424-1(a) (notwithstanding the fact that the original Option may never have been intended to satisfy the requirements for treatment as an Incentive Stock Option); or (iv) cancel any Option held by a Participant affected by the Change in Control in exchange for cash and/or other substitute consideration with a value equal to (A) the number of Shares subject to that Option, multiplied by (B) the difference, if any, between the Fair Market Value per Share on the date of the Change in Control and the exercise price of that Option; provided, that if the Fair Market Value per Share on the date of the Change in Control does not exceed the exercise price of any such Option, the Board may cancel that Option without any payment of consideration therefor.

(f) Notwithstanding anything contained in the Plan or in a Stock Option Agreement to the contrary, in the event of a Change in Control, each Participant shall, except to the extent otherwise determined by the Board, be subject to substantially the same escrow, indemnification and similar obligations, contingencies and encumbrances contained in the definitive agreement relating to the Change in Control as other stockholders of the Company may be subject (including, without limitation, the requirement to contribute a proportionate number of Shares issued as a result of the exercise or vesting of an Award, or any cash or property that may be received upon exercise or exchange of an Award, to an escrow fund, or otherwise have a proportionate amount of such Shares, cash or other property encumbered by the indemnification, escrow and similar provisions of such definitive agreement). By accepting an Award, a Participant agrees to execute such documents and instruments as the Board may reasonably require for the Participant to be bound by such obligations. In the event that a Participant fails or refuses to execute such documents and instruments, such Participant's Award (to the extent outstanding as of the date of the Change in Control) shall, unless otherwise determined by the Board, be canceled and be of no further force and effect upon the consummation of a Change in Control.

16. **Effective Date**. This Plan shall be effective immediately; provided, however, that the effectiveness of this Plan is conditioned on its approval by the stockholders of the Company in accordance with Delaware law within 12 months after the date this Plan is adopted by the Board. All awards under this Plan shall be null and void if the Plan is not approved by the stockholders within such 12-month period.

17. **Securities Laws.** The Board shall condition any Award upon compliance with applicable securities laws. The Board may require each Participant to represent to and agree with the Company in writing that the Participant is acquiring securities of the Company for investment purposes and without a view to distribution thereof and as to such other matters as the Board believes are appropriate. The certificate evidencing any Award and any securities issued pursuant thereto may include any legend which the Board deems appropriate to reflect any restrictions on transfer and compliance with applicable securities laws. All certificates for Option Shares or other securities delivered under the Plan will be subject to such share-transfer orders and other restrictions as the Board may deem advisable under the rules, regulations, and other requirements of the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, any stock exchange upon which the Option Shares are then listed, and any other applicable federal or state securities laws, and the Board may cause a legend or legends to be put on any such certificates to make appropriate reference to such restrictions.

18. **Invalid Provisions**. In the event that any provision of this Plan is found to be invalid or otherwise unenforceable under any applicable law, such invalidity or unenforceability will not be construed as rendering any other provisions contained herein as invalid or unenforceable, and all such other provisions will be given full force and effect to the same extent as though the invalid or unenforceable provision was not contained herein.

19. **Term**. No Option shall be granted pursuant to this Plan more than 10 years after the earlier of (a) the date on which this Plan is first approved by the stockholders of the Company or (b) the date the Plan is adopted by the Board, but awards granted prior to such date shall continue in effect thereafter subject to the terms thereof and of this Plan.

20. **Notices**. Any notice to be given to the Company pursuant to the provisions of the Plan will be given by registered or certified mail, postage prepaid, and, addressed, if to the Company to its Secretary (or such other person as the Company may designate in writing from time to time) at its principal executive office, and, if to a Participant, to the address given beneath his or her signature on his or her Stock Option Agreement, or at such other address as such Participant may hereafter designate in writing to the Company. Any such notice will be deemed duly given on the date and at the time delivered via personal, courier or recognized overnight delivery service or on the date five (5) days after the date of the mailing (which will be by regular, registered or certified mail).

END OF DOCUMENT

Exhibit 10.9

MAIA Biotechnology, Inc.

Amended and Restated 2020 Equity Incentive Plan

Approved by the Board of Directors on: May 29, 2020, with an Effective Date as of May 1, 2020.

As amended by the Board of Directors: latest amendment on July 23, 2021.

1. Purpose; Eligibility.

(a) **Purpose**. The name of this plan is the "MAIA Biotechnology, Inc., Amended and Restated 2020 Equity Incentive Plan." The purposes of this Plan are to promote share ownership by key Employees, Directors and Consultants of MAIA Biotechnology, Inc. (the "Company"), a Delaware corporation, thereby reinforcing a mutuality of interest with other stockholders, and to enable the Company to attract, retain and motivate key Employees, Directors and Consultants by permitting them to share in its growth.

(b) **Eligibility Award Recipients**. The persons eligible to receive Awards under the Plan are Employees, Directors and Consultants of the Company and its Affiliates.

(c) **Available Awards**. Awards that may be granted under the Plan include: (i) Incentive Stock Options; (ii) Non-Qualified Stock Options; (iii) Restricted Stock; and (iv) Restricted Stock Units.

2. Definitions. As used in this Plan:

"Affiliate" means, with respect to a Person, a Person that directly or indirectly Controls, or is Controlled by, or is under common Control with such Person.

"Award" means any right granted under the Plan, including an Incentive Stock Option, a Non-Qualified Stock Option, a Restricted Stock Award or Restricted Stock Unit Award.

"Award Agreement" means a written agreement, contract, certificate or other instrument or document evidencing the terms and conditions of an individual Award granted under the Plan which may, in the discretion of the Company, be transmitted electronically to any Participant. Each Award Agreement shall be subject to the terms and conditions of the Plan.

"Award Shares" means Shares acquired upon the exercise of an Option Award, vesting of a Restricted Stock Award or settlement of a Restricted Stock Unit Award, as the case may be.

"Board" means the Board of Directors of the Company.

"Cause" means, in the case of a particular Award, unless the applicable Award Agreement states otherwise, (i) with respect to any Employee or Consultant: (a) the Company or any of its Affiliates having "cause" to terminate a Participant's employment or services, as defined in any employment or consulting agreement between the Company or any of its Affiliates and the Participant in effect at the time of such termination; or (b) in the absence of any such employment or consulting agreement (or the absence of any definition of "Cause"

contained therein): (1) the Participant's conviction of, or the entry of a plea of guilty or no contest to, a felony (or any state-law equivalent), a crime involving moral turpitude or any other crime that causes, or is reasonably likely to cause, the Company or any of its Affiliates public disgrace or disrepute, or materially and adversely affects, or is reasonably likely to materially and adversely affect, the Company's or any of its Affiliates' operations or financial performance or the relationship the Company or any of its Affiliate's has with its customers, distributors, partners or suppliers; (2) the Participant's gross negligence, willful misconduct or a material act of disloyalty with respect to the Company or any of its Affiliates, including, without limitation fraud, embezzlement, theft or proven dishonesty; (3) the Participant's alcohol abuse or use of controlled drugs other than in accordance with a physician's prescription that materially impair the Participant's ability to perform his or her duties to the Company or any of its Affiliates; (4) the Participant's failure or refusal to perform any lawful, material obligation or fulfill any duty (other than any duty or obligation of the type described in clause (6) below) to the Company or its Affiliates (other than due to a Disability), which refusal, if curable, is not cured within 15 days after delivery of written notice thereof; (5) the Participant's material breach of any agreement with or duty owed to the Company or any of its Affiliates, which breach, if curable, is not cured within 15 days after the delivery of written notice thereof; or (6) any breach of any obligation or duty to the Company or any of its Affiliates (whether arising by statute, common law or agreement) relating to confidentiality, noncompetition, nonsolicitation or proprietary rights; and (ii) with respect to any Director: (a) gross negligence, willful misconduct or a material act of disloyalty with respect to the Company or any of its Affiliates, including, without limitation fraud, embezzlement, theft or proven dishonesty; (b) false or fraudulent misrepresentation inducing the Director's appointment; or (c) repeated failure to participate in Board meetings on a regular basis despite having received proper notice. Any determination of whether Cause exists shall be made by a majority of the disinterested members of the Board in its sole discretion.

"Change in Control" means, in the case of a particular Award, unless the applicable Award Agreement states otherwise, the occurrence, whether in a single transaction or series of related transactions, of any one or more of the following: (i) the consummation of an acquisition, merger or consolidation of the Company with or into another entity or any other corporate reorganization, in which the holders of the Company's outstanding voting securities immediately prior to such transaction hold less than a majority of the continuing or surviving entity's outstanding voting securities immediately after such transaction; (ii) the sale of more than a majority of the outstanding securities of each class of capital stock of the Company to a Person other than an Affiliate of the Company; or (iii) the sale, transfer or other disposition of all or substantially all of the Company's assets to a Person other than an Affiliate of the Company. A transaction shall not constitute a "Change in Control" if its principal purpose is: (a) to change the state of the Company's incorporation; (b) to create a holding company that will be owned in substantially the same proportions by the Persons who held the Company's securities immediately prior to such transaction; or (c) for capital raising purposes. In addition, an Initial Public Offering shall not constitute a Change in Control. If the timing of payments provided under an Award Agreement is based on or triggered by a Change in Control then, to extent necessary to avoid violating Section 409A, a Change in Control must also constitute a "change in control event" as defined in the Code.

"Code" means the Internal Revenue Code of 1986, as amended, supplemented or restated from time to time, and any successor to such statute.

"Committee" means a committee of one or more members of the Board appointed by the Board to administer the Plan in accordance with Section 3.

"Company" means MAIA Biotechnology, Inc., a Delaware corporation, and any successor thereto.

"Consultant" means any individual who is engaged by the Company or any Affiliate of the Company to render bona fide consulting or advisory services, other than in connection with the offer or sale of securities in a capital-raising transaction, whether or not such individual is compensated for such services.

"Control" means, as to any Person, the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise (the terms "Controlled by" and "under common Control with" shall have correlative meanings).

"Date of Grant" means the date on which the Committee adopts a resolution, or takes other appropriate action, expressly granting an Award to a Participant that specifies the key terms and conditions of the Award or, if a later date is set forth in such resolution, then such date as is set forth in such resolution. The Date of Grant shall not be earlier than the date of the resolution and action therein by the Committee.

"Detrimental Activity" means any of the following: (i) unauthorized disclosure of any confidential or proprietary information of the Company or any of its Affiliates; (ii) any activity that would be grounds to terminate the Participant's employment or service with the Company or any of its Affiliates for Cause; (iii) the breach of any non-competition, non- solicitation, non-disparagement or other agreement containing restrictive covenants, with the Company or any of its Affiliates; (iv) fraud or conduct contributing to any financial restatements or irregularities, as determined by the Committee in its sole discretion; or (v) any other conduct or act determined to be materially injurious, detrimental or prejudicial to any interest of the Company or any of its Affiliates, as determined by the Committee in its sole discretion.

"Director" means a member of the Board.

"Disability" means that the Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment; provided, however, for purposes of determining the term of an Incentive Stock Option pursuant to Section 5(i)(iii) hereof, the term Disability shall have the meaning ascribed to it under Section 22(e)(3) of the Code. The determination of whether an individual has a Disability shall be determined under procedures established by the Committee. Except in situations where the Committee is determining Disability for purposes of the term of an Incentive Stock Option pursuant to Section 5(i)(iii) hereof within the meaning of Section 22(e)(3) of the Code, the Committee may rely on any determination that a Participant is disabled for purposes of benefits under any long-term disability plan maintained by the Company or any Affiliate in which a Participant participates.

"Employee" means any individual, including an officer or Director, employed by the Company or any of its Affiliate; provided that for purposes of determining eligibility to receive Incentive Stock Options, an Employee shall mean an employee of the Company or an Affiliate of the Company within the meaning of Section 424 of the Code. Mere service as a Director or payment of a director's fee by the Company or any of its Affiliate shall not be sufficient to constitute "employment."

"Fair Market Value" means, as of any given day, the amount determined in good faith by the Committee to be the fair market value of a Share on such day, which determination shall be made by the Committee in good faith after taking into consideration all factors which the Committee deems appropriate, including, without limitation, with Sections 409A and 422 of the Code, and such determination shall be conclusive and binding for all purposes.

"Incentive Stock Options" means Options that are intended to qualify as "incentive stock options" under Section 422 of the Code.

"Initial Public Offering" means the first public offering of the Company's equity securities registered under the Securities Act of 1933, as amended, supplemented or restated from time to time, or any successor statute, or such other event as a result of which outstanding equity securities of the Company (or any successor entity) shall be publicly traded.

"Nonqualified Stock Option" means an Option that is not intended to meet the requirements of Section 422 of the Code or otherwise does not meet such requirements.

"Option" means an Incentive Stock Option, or a Non-Qualified Stock Option granted pursuant to the Plan.

"Option Price" means the purchase price per Award Share payable on exercise

of an Option.

"Participant" means an eligible Employee, Director or Consultant to whom an

Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Award.

"Person" means an individual, partnership, corporation, limited liability company, trust, joint venture, unincorporated association, or other entity or association, or one or more Persons acting in concert as a group.

"Plan" means this MAIA Biotechnology, Inc., 2020 Amended and Restated Equity Incentive Plan, as further amended or amended and restated from time to time.

"Repurchase Event" has the meaning set forth in Section 7(a). "Repurchase Period" has the meaning set forth in Section 7(a).

"Repurchase Right" means the Company's right to repurchase Award Shares as set forth in Section 7 of this Plan.

"Restricted Award" is an Award of Restricted Stock or Restricted Stock Units. "Restricted Period" has the meaning set forth in Section 6.

"Restricted Stock" means Shares, subject to certain specified restrictions (including, without limitation, a requirement that the Participant provide continuous service for a specified period of time) granted under Section 6(a) of this Plan.

"Restricted Stock Unit" means an unfunded and unsecured promise to deliver Shares, cash, other securities or other property, subject to certain restrictions (including, without limitation, a requirement that the Participant provide continuous service for a specified period of time) granted under Section 6(b) of this Plan

"Right of First Refusal" means the Company's right of first refusal as set forth in Section 8 of this Plan.

"Section 409A" means Section 409A of the Code and all regulations, guidance, compliance programs and other interpretive authority thereunder,

"Shares" means shares of the Common Stock, $0.0001 par value, of the Company or any security into which such shares may be changed by reason of any transaction or event of the type referred to in Section 9.

"Stockholders' Agreement" means any stockholders' agreement (including, but not limited to, the Company's bylaws and Certificate of Incorporation, if and as applicable, and as from time to time in effect) by and among, or otherwise binding, the Company and certain stockholders or one or more agreements among the Company, a Participant (or such Participant's estate, heirs or beneficiaries) and other parties thereto in such form determined from time to time by the Company in its sole discretion, that include terms and conditions that provide the Company or other stockholders with (i) a right of first refusal or impose other restrictions with respect to the transfer of Shares, (ii) call rights or rights of repurchase with respect to the Shares (iii) a voting agreement with respect to Shares, (iv) "drag-along" rights in favor of the stockholders owning a specified threshold of Shares, (v)"market standoff" or "lock-up" conditions, and (vi) such other reasonable terms and conditions as the Committee may require, if any.

"Ten Percent Stockholder" means any Participant who owns (or is deemed to own pursuant to Section 424(d) of the Code) more than 10% of the combined voting power of all classes of stock of the Company or any of its Affiliates.

3. Administration.

(a) **Authority of the Committee**. This Plan shall be administered by the Board, which may from time to time delegate all or any part of its authority under this Plan to a Committee appointed by the Board. Subject to the terms of the Plan, the Committee's charter, if any, and applicable laws, and in addition to other express powers and authorization conferred by the Plan, the Committee shall have the authority to:

(i) to construe and interpret the Plan and apply its provisions;

(ii) to promulgate, amend, and rescind rules and regulations relating to the administration of the Plan;

(iii) to authorize any person to execute, on behalf of the Company, any instrument required to carry out the purposes of the Plan;

(iv) to delegate its authority to one or more officers of the Company;

(v) to determine when Awards are to be granted under the Plan and the applicable Date of Grant;

(vi) from time to time to select, subject to the limitations set forth in this Plan, those Participants to whom Awards shall be granted;

(vii) to determine the number of Shares to be made subject to each Award;

(viii) to determine whether each Option is to be an Incentive Stock

Option or a Non-Qualified Stock Option;

(ix) to prescribe the terms and conditions of each Award, including, without limitation, the exercise price and medium of payment and vesting provisions, and to specify the provisions of the Award Agreement relating to such grant;

(x) to amend any outstanding Awards, including for the purpose of modifying the time or manner of vesting, or the term of any outstanding Award; provided, however, that if any such amendment impairs a Participant's rights or increases a Participant's obligations under his or her Award or creates or increases a Participant's federal income tax liability with respect to an Award, such amendment shall also be subject to the Participant's consent;

(xi) to determine the duration and purpose of leaves of absences which may be granted to a Participant without constituting termination of their employment for purposes of the Plan, which periods shall be no shorter than the periods generally applicable to Employees under the Company's employment policies;

(xii) to interpret, administer, reconcile any inconsistency in, correct any defect in or supply any omission in the Plan and any instrument or agreement relating to, or Award granted under, the Plan; and

(xiii) to exercise discretion to make any and all other determinations which it determines to be necessary or advisable for the administration of the Plan.

(b) **Committee Decisions Final**. Any determination by the Committee pursuant to any provision of this Plan shall be final, binding and conclusive on the Company and the Participants, unless such determinations are found by a court of competent jurisdiction to be arbitrary and capricious.

(c) **Acquisitions and Other Transactions**. The Committee may, from time to time, assume outstanding awards granted by another entity, whether in connection with an acquisition of such other entity or otherwise, by either (i) granting an Award under the Plan in replacement of or in substitution for the award assumed by the Company, or (ii) treating the assumed award as if it had been granted under the Plan if the terms of such assumed award could be applied to an Award granted under the Plan. Such assumed award shall be permissible if the holder of the assumed award would have been eligible to be granted an Award hereunder if the other entity had applied the rules of this Plan to such grant. The Committee may also grant Awards under the Plan in settlement of or in substitution for outstanding awards or obligations to grant future awards in connection with the Company or an Affiliate acquiring another entity, an interest in another entity, or an additional interest in an Affiliate whether by merger, stock purchase, asset purchase or other form of transaction.

(d) **Delegation**. The Committee, or if no Committee has been appointed, the Board, may delegate administration of the Plan to a committee or committees of one or more members of the Board, and the term "Committee" shall apply to any person or persons to whom such authority has been delegated. The Committee shall have the power to delegate to a subcommittee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board or the Committee shall thereafter be to the committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the

Plan, as may be adopted from time to time by the Board. The Board may abolish the Committee at any time and revest in the Board the administration of the Plan. The members of the Committee shall be appointed by and serve at the pleasure of the Board. From time to time, the Board may increase or decrease the size of the Committee, add additional members to, remove members (with or without cause) from, appoint new members in substitution therefor, and fill vacancies, however caused, in the Committee. The Committee shall act pursuant to a vote of the majority of its members or, in the case of a Committee comprised of only two members, the unanimous consent of its members, whether present or not, or by the written consent of the majority of its members and minutes shall be kept of all of its meetings and copies thereof shall be provided to the Board. Subject to the limitations prescribed by the Plan and the Board, the Committee may establish and follow such rules and regulations for the conduct of its business as it may determine to be advisable.

(e) **Uniformity of Awards**. The Committee shall have no obligation to treat Participants or eligible Participants uniformly, and the Committee may make determinations made under the Plan selectively among Participants who receive or who are eligible to receive Awards (whether or not such Participants or eligible Participants are similarly situated).

4. Shares Available.

(a) Subject to adjustment as provided in Section 9 of this Plan, the total number of Shares available for the grant of Awards pursuant to this Plan shall not exceed 4,171,000 Shares, any or all of which may be issued under Incentive Stock Options. Such Shares may be treasury Shares, Shares reacquired by the Company or Shares of original issue or a combination of the foregoing.

(b) Any Shares subject to an Award that expires or is canceled, forfeited or terminated without issuance of the full number of Shares to which the Award related will again be available for issuance under the Plan.

5. Options. The Committee may, from time to time and upon such terms and conditions as it may determine, authorize the granting of Options to Participants. Each Option granted under the Plan shall be evidenced by an Award Agreement. Each Option granted shall be subject to all of the requirements contained in the Plan, including following provisions in this Section 5, and such other terms not inconsistent with the Plan as may be reflected in the applicable Award Agreement.

(a) Each grant shall specify the number of Shares to which it pertains and shall separately designate whether the Options are intended to be Incentive Stock Options, Nonqualified Stock Options, or a combination of the foregoing. Notwithstanding the foregoing, the Company shall have no liability to any Participant or any other Person if an Option designated as an Incentive Stock Option fails to qualify as such at any time or if an Option is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A and the terms of such Option do not satisfy the requirements of Section 409A.

(b) Each grant shall specify an Option Price, which shall be at least equal to the Fair Market Value of a Share on the Date of Grant. In the case of an Incentive Stock Option granted to a Ten Percent Stockholder, the Option Price shall be at least equal to one hundred ten percent (110%) of the Fair Market Value of a Share on the Date of Grant.

(c) The Option Price shall be payable (i) in cash or by other consideration acceptable to the Company, (ii) by the actual or constructive transfer to the Company of Shares

owned by the Participant having a Fair Market Value at the time of exercise equal to the total Option Price, (iii) by a combination of such methods of payment, or (iv) any other method approved or accepted by the Committee in its sole discretion, including, if the Committee so determines, a cashless exercise that complies with all applicable laws.

(d) Each grant shall specify the period or periods of continuous service by the Participant with the Company or any of its Affiliates that is necessary before the Options or installments thereof will become exercisable and may provide for earlier exercise of the Option, including, without limitation, in the event of a Change in Control or similar event. Any grant may specify performance conditions that must be satisfied as a condition to the exercise or early exercise of the Option.

(e) No Option shall be exercisable more than 10 years after the Date of Grant. In the case of an Incentive Stock Option granted to a Ten Percent Stockholder, the Incentive Stock Option shall not be exercisable later than 7 years after its Date of Grant.

(f) A Participant may exercise an Option in whole or in part at any time and from time to time during the period within which an Option may be exercised. To exercise an Option, a Participant shall give written notice to the Company specifying the number of Shares to be purchased and provide payment of the Option Price and any other documentation that may be required by the Company.

(g) To the extent required for Incentive Stock Option status under Section 422 of the Code, the aggregate Fair Market Value (determined as of the Date of Grant) of the Shares with respect to which Incentive Stock Options are exercisable for the first time by the Participant during any calendar year under the Plan and any other stock option plan of the Company (within the meaning of Section 424 of the Code) shall not exceed $100,000. To the extent any Option granted under the Plan which is intended to be an Incentive Stock Option exceeds the limitation set forth above in this Section 5(g), such Option shall be treated as a Nonqualified Stock Option.

(h) Notwithstanding the foregoing provisions of this Section 5, Incentive Stock Options may be granted only to eligible Participants who are Employees.

(i) **Termination of Service**. Notwithstanding anything herein to the contrary, unless otherwise provided in the applicable Award Agreement:

(i) If a Participant's service with the Company or any of its Affiliates is terminated for Cause any Option not already exercised will be immediately and automatically forfeited as of the date of such termination without consideration therefor.

(ii) If a Participant's service with the Company or any of its Affiliates terminates by reason of death, any Option held by such Participant may thereafter be exercised, to the extent then exercisable or on such accelerated basis as the Committee may determine, at or after grant, by the legal representative of the estate or by the legatee of the Participant under the will of the Participant, for a period expiring (A) at such time as may be specified by the Committee at or after the time of grant (which, in the event that the Participant resides in the State of California, shall be no less than 6 months from the date of termination), (B) if not specified by the Committee, then 12 months from the date of death, or (C) if sooner than the applicable period specified under (A) or (B) above, then upon the expiration of the stated term of such Option.

(iii) If a Participant's service with the Company or any of its Affiliates terminates by reason of Disability any Option held by such Participant may thereafter be exercised by the Participant or his or her personal representative, to the extent it was exercisable at the time of termination for a period expiring on the earlier of (A) 12 months from the date of termination, or (B) the expiration of the stated term of such Option.

(iv) If a Participant's service with the Company or any of its Affiliates terminates for any reason other than death, Disability or Cause, any Option held by such Participant may thereafter be exercised by the Participant, to the extent it was exercisable at the time of such termination, or on such accelerated basis as the Committee may determine at or after grant, for a period expiring (A) at such time as may be specified by the Committee at or after the time of grant (which, in the event that the Participant resides in the State of California, shall be no less than 30 days from the date of termination), (B) if not specified by the Committee, then 90 days from the date of termination of service, or (C) if sooner than the applicable period specified under (A) or (B) above, then upon the expiration of the stated term of such Option.

(j) **Detrimental Activity**. Notwithstanding anything herein to the contrary, unless otherwise provided in an Award Agreement, all outstanding Options (whether or not vested) shall immediately terminate and cease to be exercisable on the date on which aa Participant engages in Detrimental Activity.

6. Restricted Awards. Each Restricted Award granted under the Plan shall be evidenced by an Award Agreement, which may, but need not, provide that such Restricted Award may not be sold, assigned, transferred or otherwise disposed of, pledged or hypothecated as collateral for a loan or as security for the performance of any obligation or for any other purpose for such period as the Committee shall determine (the "Restricted Period"). Each Restricted Award shall also be subject to the conditions set forth in this Section 6, and to such other conditions not inconsistent with the Plan as may be reflected in the applicable Award Agreement. No Restricted Award may be granted or settled for a fraction of a Share.

(a) **Restricted Stock**. Each Participant granted Restricted Stock shall execute and deliver to the Company an Award Agreement with respect to the Restricted Stock setting forth the restrictions and other terms and conditions applicable to such Restricted Stock. If the Committee determines that the Restricted Stock shall be held by the Company or in escrow rather than delivered to the Participant pending the release of the applicable restrictions, the Committee may require the Participant to additionally execute and deliver to the Company (i) an escrow agreement satisfactory to the Committee, if applicable and (ii) the appropriate blank stock power with respect to the Restricted Stock covered by such agreement. If a Participant fails to execute an agreement evidencing an Award of Restricted Stock and, if applicable, an escrow agreement and stock power, the Award shall be null and void. Subject to the restrictions set forth in the Award Agreement, the Participant generally shall have the rights and privileges of a stockholder as to such Restricted Stock, including the right to vote such Restricted Stock and the right to receive dividends.

(b) **Restricted Stock Units**. The terms and conditions of a grant of Restricted Stock Units shall be reflected in an Award Agreement. No Shares shall be issued at the time a Restricted Stock Unit is granted, and the Company will not be required to set aside funds for the payment of any such Award. A Participant shall have no voting rights with respect to any Restricted Stock Units granted hereunder.

(c) **Restrictions**.

(i) **Restrictions on Restricted Stock**. Restricted Stock awarded to a Participant shall be subject to the following restrictions until the expiration of the Restricted Period, and to such other terms and conditions as may be set forth in the applicable Award Agreement: (A) if an escrow arrangement is used, the Participant shall not be entitled to delivery of stock certificates or, in the case of uncertificated Shares, notice of issuance; (B) the Shares shall be subject to the restrictions on transferability set forth in the Award Agreement; (C) the Shares shall be subject to forfeiture to the extent provided in the applicable Award Agreement; and (D) to the extent such Shares are forfeited, the stock certificates, if any, shall be returned to the Company, and all rights of the Participant to such Shares and as a stockholder with respect to such Shares shall terminate without further obligation on the part of the Company.

(ii) **Restrictions on Restricted Stock Units**. Restricted Stock Units awarded to a Participant shall be subject to (A) forfeiture until the expiration of the Restricted Period and satisfaction of any applicable performance goals during such period, to the extent provided in the applicable Award Agreement, and to the extent such Restricted Stock Units are forfeited, all rights of the Participant to such Restricted Stock Units shall terminate without further obligation on the part of the Company, and (B) such other terms and conditions as may be set forth in the applicable Award Agreement.

(d) **Committee Discretion to Remove Restrictions**. The Committee shall have the authority to remove any or all of the restrictions on the Restricted Stock or Restricted Stock Units whenever it may determine that, by reason of changes in applicable laws or other changes in circumstances arising after the Date of Grant, such action is appropriate.

(e) **Restricted Period**. The Restricted Period shall commence on the Date of Grant and end at the time or times set forth on a schedule established by the Committee in the applicable Award Agreement; provided, however, that notwithstanding any such vesting dates, the Committee may in its sole discretion accelerate the vesting of any Restricted Award at any time and for any reason. The Committee may, but shall not be required to, provide for an acceleration of vesting in the terms of any Award Agreement upon the occurrence of a specified event.

(f) **Delivery of Restricted Stock and Settlement of Restricted Stock Units**. Upon the expiration of the Restricted Period with respect to any Restricted Stock, the restrictions set forth in Section 6(c)(i) shall be of no further force or effect, unless otherwise set forth in the applicable Award Agreement. If an escrow arrangement is used, upon such expiration, the Company shall deliver to the Participant, or his or her beneficiary, without charge, the stock certificate or, in the case of uncertificated Shares, notice of issuance, for the Restricted Stock. Upon the expiration of the Restricted Period with respect to any outstanding Restricted Stock Units, the Company shall deliver to the Participant, or his or her beneficiary, without charge, one Share for each outstanding Restricted Stock Unit; provided, however, that if explicitly provided in the Award Agreement, the Committee may, in its sole discretion, elect to pay part cash or part cash and part Shares in lieu of delivering only Shares for vested Restricted Stock Units. If a cash payment is made in lieu of delivering Shares, the amount of such payment shall be equal to the Fair Market Value of the Shares as of the date on which the Restricted Period lapsed.

7. Company's Repurchase Right.

(a) The Company shall have the right to repurchase some or all of the Award Shares of a Participant upon the occurrence of any of the events specified in Section 7(b) below (the "Repurchase Event"). The Repurchase Right may be exercised by the Company within 180 days following the date of such event (the "Repurchase Period"). The Repurchase Right shall be exercised by the Company by giving the holder written notice on or before the last day of the Repurchase Period of its intention to exercise the Repurchase Right, and, together with such notice, tendering to the holder an amount equal to the Fair Market Value of the Award Shares, as provided in Section 7(c); provided, however, that if the Repurchase Event was the termination of Participant's employment or other service with the Company or any of its Affiliates for Cause, the amount payable on exercise of the Repurchase Right shall equal the lesser of the Fair Market Value of the Award Shares and, if applicable, the Option Price the Participant had paid for the exercise of the Award Shares. The Company may assign the Repurchase Right to one or more Persons. Upon exercise of the Repurchase Right in the manner provided in this Section 7(a), the Participant shall promptly deliver to the Company the stock certificate or certificates, if any, representing the Award Shares being repurchased, duly endorsed and free and clear of any and all liens, charges and encumbrances. Upon the Company's receipt of the certificates, if any, from the Participant (or at such later date as is determined to be necessary by the Committee to avoid any breach by the Company of any agreement to which it is a party), the Company shall deliver to the Participant a check for the purchase price of the Award Shares being purchased; provided, however, that the Company may pay the purchase price for such Award Shares by offsetting and canceling any indebtedness then owed by the Participant to the Company. If Award Shares are not purchased under the Repurchase Right, the Participant and his or her successor in interest, if any, will hold any such Award Shares in his or her possession subject to all of the provisions of this Section 7 and Section 8 hereof.

(b) **Company's Right to Exercise Repurchase Right**. The Company shall have the Repurchase Right in the event that any of the following events shall occur:

(i) The termination of the Participant's employment or other service with the Company and any of its Affiliates for any reason whatsoever, regardless of the circumstances thereof, and including without limitation upon death, Disability, retirement, discharge (with or without Cause) or resignation for any reason, whether voluntary or involuntarily; or

(ii) The (A) filing of a voluntary petition under any bankruptcy or insolvency law, or a petition for the appointment of a receiver or the making of an assignment for the benefit of creditors, with respect to the Participant, or (B) the Participant being subjected involuntarily to a petition or assignment or to an attachment or other legal or equitable interest with respect to his or her assets, which involuntary petition or assignment or attachment is not discharged within 60 days after its date or (C) the Participant being subject to a transfer of Award Shares by operation of law, except by reason of death.

(c) **Determination of Fair Market Value**. For purposes of this Section 7, the Fair Market Value of the Award Shares shall be determined by the Committee as of a date no more than 90 days prior to the date on which the Company provides written notice pursuant to Section 7(a) of its exercise of the Repurchase Right.

(d) **Expiration of Company's Repurchase Right**. The Repurchase Right of the Company set forth in this Section 7 shall remain in effect until the closing of an Initial Public Offering.

8. Company's Right of First Refusal.

(a) **Exercise of Right**. If at any time the Participant desires to transfer all or any part of the Award Shares to any Person other than the Company (an "Offeror"), the Participant shall: (i) obtain in writing an arms' length, bona fide offer, subject only to customary (if any) closing conditions (the "Offer"), for the purchase thereof from the Offeror; and (ii) give written notice (the "Offer Notice") to the Company setting forth the Participant's desire to transfer such Award Shares, which Offer Notice shall be accompanied by a photocopy of the Offer and shall set forth the name and address of the Offeror and the price and terms of the Offer. Upon receipt of the Offer Notice, the Company shall have an assignable option to purchase any or all of such Award Shares (the "Offered Shares") specified in the Offer Notice, such option to be exercisable by giving, within 10 days after receipt of the Offer Notice, a written counter notice to the Participant. If the Company elects to purchase any or all of such Offered Shares, it shall be obligated to purchase, and the Participant shall be obligated to sell to the Company, such Offered Shares at the price and terms indicated in the Offer within 30 days from the date of delivery by the Company of such counter notice.

(b) **Sale of Award Shares to Offeror**. The Participant may, for 60 days after the expiration of the 10 day option period as set forth in Section 8(a), sell to the Offeror, pursuant to the terms of the Offer, any or all of such Offered Shares not purchased or agreed to be purchased by the Company or its assignee. If any or all of such Offered Shares are not sold pursuant to an Offer within the time permitted above, the unsold Offered Shares shall remain subject to the terms of this Section 8.

(c) **Adjustments for Changes in Capital Structure**. If there shall be any change in the Shares of the Company through merger, consolidation, reorganization, recapitalization, stock dividend, stock split, combination or exchange of Shares, or the like, the restrictions contained in this Section 8 shall apply with equal force to additional or substitute securities, if any, received by the Participant in exchange for, or by virtue of his or her ownership of, Award Shares.

(d) **Failure to Deliver Award Shares**. If the Participant fails or refuses to deliver on a timely basis duly endorsed certificates representing Offered Shares to be sold to the Company or its assignee pursuant to this Section 8, the Company shall have the right to deposit the purchase price for such Offered Shares in a special account with any bank or trust company, giving notice of such deposit to the Participant, whereupon such Offered Shares shall be deemed to have been purchased by the Company. All such monies shall be held by the bank or trust company for the benefit of the Participant. All monies deposited with the bank or trust company but remaining unclaimed for two years after the date of deposit shall be repaid by the bank or trust company to the Company on demand, and the Participant shall thereafter look only to the Company for payment. The Company may place a legend on any certificate for Award Shares delivered to the Participant reflecting the restrictions on transfer provided in this Section 8.

(e) **Expiration of Company's Right of First Refusal**. The first refusal rights of the Company set forth above shall remain in effect until the closing of an Initial Public Offering.

9. Transferability. Except as the Committee may determine or provide in an Award Agreement or otherwise, in accordance with applicable laws, Awards (a) may not be sold, assigned, transferred, pledged or otherwise encumbered, either voluntarily or by operation of law, except (i) by will or the laws of descent and distribution, or (ii) subject to the Committee's consent, pursuant to a domestic relations order as defined by the Code or

Title I of the Employee Retirement Income Security Act of 1974, as amended, and (b) during the life of the Participant, will be exercisable only by the Participant. Any permitted transfer of an Award hereunder shall be without consideration, except as required by applicable law. References to a Participant, to the extent relevant in the context, will include references to a Participant's authorized transferee that the Committee specifically approves under applicable law.

10. Adjustments. The Committee shall make or provide for such adjustments in the Option Price and in the number or kind of Shares or other securities covered by outstanding Awards as the Committee in its sole discretion determines to be equitably required in order to prevent dilution or enlargement of the rights of Participants that would otherwise result from any (a) stock dividend, stock split, combination of Shares, recapitalization or other change in the capital structure of the Company, (b) merger, consolidation, separation, reorganization, partial or complete liquidation, or (c) other corporate transaction or event having an effect similar to any of the foregoing. Moreover, in the event of any such transaction or event, the Committee, in its discretion, may provide in substitution for any or all outstanding Awards under this Plan such alternative consideration (including cash) as it, in good faith, determines to be equitable in the circumstances and may require in connection therewith the surrender of all Awards so replaced. The Committee may also make or provide for such adjustments in the number of Shares specified in Section 4 of this Plan as the Committee in its sole discretion, exercised in good faith, may determine is appropriate to reflect any transaction or event described in this Section 9. Notwithstanding the foregoing, the Committee shall not make any adjustment pursuant to this Section 9 that would (i) cause any Option intended to qualify as an Incentive Stock Option to fail to so qualify, (ii) cause an Option that is otherwise exempt from Section 409A to become subject to Section 409A, or (iii) cause an Option that is subject to Section 409A to fail to satisfy the requirements of Section 409A.

11. Section 409A.

(a) **General**. The Company intends that all Awards be structured to comply with, or be exempt from, Section 409A, such that no adverse tax consequences, interest, or penalties under Section 409A apply. Notwithstanding anything in the Plan or any Award Agreement to the contrary, the Committee may, without a Participant's consent, amend this Plan or Awards, adopt policies and procedures, or take any other actions (including amendments, policies, procedures and retroactive actions) as are necessary or appropriate to preserve the intended tax treatment of Awards, including any such actions intended to (i) exempt this Plan or any Award from Section 409A, or (ii) comply with Section 409A, including regulations, guidance, compliance programs and other interpretative authority that may be issued after an Award's Date of Grant. The Company makes no representations or warranties as to an Award's tax treatment under Section 409A or otherwise. The Company will have no obligation under this Section 11 or otherwise to avoid the taxes, penalties or interest under Section 409A with respect to any Award and will have no liability to any Participant or any other person if any Award, compensation or other benefits under the Plan are determined to constitute noncompliant, "nonqualified deferred compensation" subject to taxes, penalties or interest under Section 409A.

(b) **Separation from Service**. If an Award constitutes "nonqualified deferred compensation" under Section 409A, any payment or settlement of such Award upon termination of a Participant's relationship with the Company or an Affiliate of the Company will, to the extent necessary to avoid taxes under Section 409A, be made only upon the Participant's "separation from service" (within the meaning of Section 409A), whether such "separation from service" occurs upon or after the termination of the Participant's relationship. For purposes of this Plan or any Award Agreement relating to any such payments or benefits, references to a "termination," "termination of employment" or like terms means a "separation from service."

(c) **Payments to Specified Employees**. Notwithstanding any contrary provision in the Plan or any Award Agreement, any payment(s) of "nonqualified deferred compensation" required to be made under an Award to a "specified employee" (as defined under Section 409A and as the Committee determines) due to his or her "separation from service" will, to the extent necessary to avoid taxes under Section 409A(a)(2)(B)(i) of the Code, be delayed for the six-month period immediately following such "separation from service" (or, if earlier, until the specified employee's death) and will instead be paid (as set forth in the Award Agreement) on the day immediately following such six-month period or as soon as administratively practicable thereafter (without interest). Any payments of "nonqualified deferred compensation" under such Award payable more than six months following the Participant's "separation from service" will be paid at the time or times the payments are otherwise scheduled to be made.

12. No Right to Employment or Other Service Rights. No person will have any claim or right to be granted an Award and nothing in the Plan or any instrument executed or Award granted pursuant thereto shall confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Award was granted or shall affect the right of the Company or an Affiliate to terminate (a) the employment of an Employee with or without notice and with or without Cause or (b) the service of a Director pursuant to the bylaws of the Company or an Affiliate, and any applicable provisions of applicable law.

13. No Stockholder Rights. Except as provided in the Plan or an Award Agreement, no Participant shall be deemed to be the holder of, or to have any of the rights of a holder with respect to, any Shares subject to an Award unless and until such Participant has satisfied all requirements for exercise or settlement of the Award pursuant to its terms (including any obligation to execute a Stockholders' Agreement) and no adjustment shall be made for dividends (ordinary or extraordinary, whether in cash, securities or other property) or distributions of other rights for which the record date is prior to the date such Shares are issued, except as provided in Section 10 hereof. In connection with the grant, vesting or exercise of any Award under the Plan, the Committee may require that the Participant shall become party to, or otherwise agree to by bound by, any Stockholders' Agreement or other agreement the Committee may require.

14. Acceleration of Exercisability and Vesting. The Committee shall have the power to accelerate the time at which an Award may first be exercised or the time during which an Award or any part thereof will vest in accordance with the Plan, notwithstanding the provisions in the Award Agreement stating the time at which it may first be exercised or the time during which it will vest.

15. Withholding. No later than the date as of which an amount first becomes includible in the gross income of the Participant for applicable tax purposes with respect to any Award under the Plan, the Participant shall pay to the Company, or make arrangements

satisfactory to the Committee regarding the payment of, any federal, state, local, foreign or other taxes of any kind required by law to be withheld with respect to such amount. Unless otherwise determined by the Committee, the minimum required withholding obligations may be settled with securities of the Company, including Award Shares that gives rise to the withholding requirement. The obligations of the Company under this Plan shall be conditional on such payment or arrangements and the Company shall, to the extent permitted by law, have the right to deduct any such taxes from any payment of any kind otherwise due to the Participant.

16. Governing Law. The Plan and all Awards granted and actions taken thereunder shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to such state's conflict of law rules.

17. Fractional Shares. The Company shall not be required to issue any fractional Shares pursuant to this Plan. The Committee may provide for the elimination of fractional Shares, by rounding, forfeiture or otherwise, or for the settlement of fractional Shares for cash, additional Awards or other securities or property.

18. Lock-Up Period. The Company may, in its discretion, in connection with an Initial Public Offering, or any other registered offering of the Company's securities under the Securities Act of 1933, as amended, prohibit a Participant from directly or indirectly selling, offering for sale, transferring or otherwise disposed of any Award Shares or other Company securities for a period of up to 180 days following the effective date of the registration statement filed in connection with the Initial Public Offering or other registered offering, or for such longer period as determined by the Committee.

19. Foreign Participants. In order to facilitate the making of any grant or combination of grants under this Plan, the Committee may provide for such special terms for Awards to Participants who are foreign nationals or who are employed by the Company or any of its Affiliates outside of the United States as the Committee may consider necessary or appropriate to accommodate differences in local law, tax policy or custom. Moreover, the Committee may approve such sub-plans or supplements to or amendments, restatements or alternative versions of this Plan as it may consider necessary or appropriate for such purposes, without thereby affecting the terms of this Plan as in effect for any other purpose, and the appropriate officer of the Company may certify any such document as having been approved and adopted in the same manner as this Plan.

20. Adjustments for Changes in Control. Notwithstanding anything to the contrary set forth in the Plan or any Award Agreement:

(a) Upon or in anticipation of any Change in Control of the Company or any of its Affiliates, the Committee may, but shall not be obligated to, in its sole and absolute discretion and without the need for the consent of any Participant, take one or more of the following actions contingent upon the occurrence of that Change in Control: (i) cause any or all outstanding Awards held by Participants affected by the Change in Control to become vested and immediately exercisable, in whole or in part; (ii) cause any or all outstanding unvested Awards held by Participants affected by the Change in Control to be cancelled without consideration therefor; (iii) cancel any Awards in exchange for a substitute option in a manner consistent with the requirements of Treas. Reg. §1.424-1(a) (notwithstanding the fact that the original Award may never have been intended to satisfy the requirements for treatment as an Incentive Stock Option); or (iv) cancel any Award held by a Participant affected by the Change in Control in exchange for cash or other substitute consideration.

(b) In the event of a Change in Control, each Participant shall, except to the extent otherwise determined by the Committee, be subject to substantially the same escrow, indemnification and similar obligations, contingencies and encumbrances contained in the definitive agreement relating to the Change in Control as other stockholders of the Company may be subject (including, without limitation, the requirement to contribute a proportionate number of Shares issued as a result of the exercise or vesting of an Award, or any cash or property that may be received upon exercise or exchange of an Award, to an escrow fund, or otherwise have a proportionate amount of such Shares, cash or other property encumbered by the indemnification, escrow and similar provisions of such definitive agreement). By accepting an Award, a Participant agrees to execute such documents and instruments as the Company may reasonably require for the Participant to be bound by such obligations. In the event that a Participant fails or refuses to execute such documents and instruments, such Participant's Award (to the extent outstanding as of the date of the Change in Control) shall, unless otherwise determined by the Committee, be canceled and be of no further force and effect upon the consummation of a Change in Control.

21. Amendment.

(a) The Board may at any time and from time to time amend or terminate the Plan. However, except as provided in Section 10 relating to adjustments and Section 21(b), no amendment shall be effective unless approved by the stockholders of the Company to the extent stockholder approval is necessary to satisfy any applicable laws. At the time of such amendment, the Board shall determine, upon advice from counsel, whether such amendment will be contingent on stockholder approval.

(b) It is expressly contemplated that the Board may amend the Plan in any respect the Board deems necessary or advisable to provide eligible Employees, Consultants and Directors with the maximum benefits provided or to be provided under the provisions of the Code and the regulations promulgated thereunder relating to Incentive Stock Options or to the nonqualified deferred compensation provisions of Section 409A or to bring the Plan or Awards granted under it into compliance therewith.

22. Participants Deemed to Accept Plan. By accepting any benefit under the Plan, each Participant and each person claiming under or through any such Participant shall be conclusively deemed to have indicated their acceptance and ratification of, and consent to, all of the terms and conditions of the Plan and any action taken under the Plan by the Board, Committee or the Company, in any case in accordance with the terms and conditions of the Plan.

23. Effective Date. This Plan shall be effective immediately; provided, however, that the effectiveness of this Plan is conditioned on its approval by the stockholders of the Company in accordance with applicable law within 12 months after the date this Plan is adopted by the Board. All Awards under this Plan shall be null and void if the Plan is not approved by the stockholders within such 12-month period.

24. Data Privacy. As a condition to receiving any Award, each Participant explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of personal data as described in this Section 24 by and among the Company and its Affiliates exclusively for implementing, administering and managing the Participant's participation in the Plan. The Company and its Affiliates may hold certain personal information about a Participant, including the Participant's name, address and telephone number; birthdate; social security, insurance number or other identification number; salary; nationality; job title(s); any securities

held in the Company or its Affiliates; and Award details, to implement, manage and administer the Plan and Awards (collectively, the "Data"). The Company and its Affiliates may transfer the Data amongst themselves as necessary to implement, administer and manage a Participant's participation in the Plan, and the Company and its Affiliates may transfer the Data to third parties assisting the Company with Plan implementation, administration and management. These recipients may be located in the Participant's country, or elsewhere, and the Participant's country may have different data privacy laws and protections than the recipients' country. By accepting an Award, each Participant authorizes such recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, to implement, administer and manage the Participant's participation in the Plan, including any required Data transfer to a broker or other third party with whom the Company or the Participant may elect to deposit any Award Shares. The Data related to a Participant will be maintained only as long as necessary to implement, administer, and manage the Participant's participation in the Plan. A Participant may, at any time, view, request additional information about the storage and processing of and recommend any necessary corrections to the Data regarding such Participant or refuse or withdraw the consents provided in this Section 24 by making a written request to the Committee. The Company may cancel the Participant's ability to participate in the Plan and, in the Committee's sole discretion, the Participant may forfeit any outstanding Awards if the Participant refuses or withdraws the consents in this Section 24.

25. Securities Laws. The Committee shall condition any Award upon compliance with applicable federal and state securities laws and the securities laws of any other applicable jurisdiction. The Committee may require each Participant to represent to and agree with the Company in writing that the Participant is acquiring securities of the Company for investment purposes and without a view to distribution thereof and as to such other matters as the Committee believes are appropriate. The certificate evidencing any Award and any securities issued pursuant thereto may include any legend which the Committee deems appropriate to reflect any restrictions on transfer and compliance with applicable federal and state securities laws and the securities laws of any other applicable jurisdiction. All certificates for Award Shares or other securities delivered under the Plan will be subject to such share-transfer orders and other restrictions as the Committee may deem advisable under the rules, regulations, and other requirements of the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, any inter-dealer quotation system or national securities exchange upon which the Award Shares are then quoted for trading or listed, and any other applicable federal or state securities laws or the securities laws of any other applicable jurisdiction, and the Committee may cause a legend or legends to be put on any such certificates to make appropriate reference to such restrictions

26. Conditions on Delivery of Award Shares. The Company will not be obligated to deliver any Award Shares under the Plan or remove restrictions from Award Shares previously delivered under the Plan until (a) all Award conditions have been met or removed to the Company's satisfaction, (b) as determined by the Company, all other legal matters regarding the issuance and delivery of such Award Shares have been satisfied, including, without limitation, any applicable securities laws, and (c) the Participant has executed and delivered to the Company such representations or agreements as the Committee deems necessary or appropriate to satisfy any applicable laws. The Company's inability to obtain authority from any regulatory body having jurisdiction, which the Committee determines is necessary to the lawful issuance and sale of any securities, will relieve the Company of any liability for failing to issue or sell such Award Shares as to which such requisite authority has not been obtained.

27. **Section 83(b) Election**. No Participant may make an election under Section 83(b) of the Code with respect to any Award under the Plan without the consent of the Committee, which the Committee may grant (prospectively or retroactively) or withhold in its sole discretion. If, with the consent of the Committee, a Participant makes an election under Section 83(b) of the Code to be taxed with respect to the Restricted Stock as of the date of transfer of the Restricted Stock rather than as of the date or dates upon which the Participant would otherwise be taxable under Section 83(a) of the Code, the Participant shall be required to deliver a copy of such election to the Company promptly after filing such election with the Internal Revenue Service.

28. **Clawback; Forfeiture**. Notwithstanding anything to the contrary contained herein, the Committee may, in its sole discretion, provide in an Award Agreement or otherwise that the Committee may cancel an Award if the Participant has engaged in or engages in any Detrimental Activity. The Committee may, in its sole discretion, also provide in an Award Agreement or otherwise that (a) if the Participant has engaged in or engages in Detrimental Activity, the Participant will forfeit any gain realized on the vesting, exercise or settlement of any Award, and must repay the gain to the Company, and (b) if the Participant receives any amount in excess of what the Participant should have received under the terms of the Award for any reason (including, without limitation, by reason of a financial restatement, mistake in calculations or other administrative error), then the Participant shall be required to repay any such excess amount to the Company. Without limiting the foregoing, all Awards shall be subject to reduction, cancellation, forfeiture or recoupment to the extent necessary to comply with applicable Law.

29. **Unfunded Plan**. The Plan shall be unfunded. Neither the Company, the Board nor the Committee shall be required to establish any special or separate fund or to segregate any assets to assure the performance of its obligations under the Plan.

30. **Governing Documents**. If any contradiction occurs between the Plan and any Award Agreement or other written agreement between a Participant and the Company (or any Affiliate of the Company) that the Committee has approved, the Plan will govern, unless it is expressly specified in such Award Agreement or other written document that a specific provision of the Plan will not apply.

31. **Limitations on Liability; Indemnification**. Notwithstanding any other provisions of the Plan, (a) no member of the Committee, shall be liable for any act, omission, interpretation, construction or determination made in connection with the Plan or any Award in good faith, and (b) no member of the Committee, director, officer, other employee or agent of the Company or any Affiliate of the Company will be liable, (i) to any Participant, former Participant, spouse, beneficiary, or any other person for any claim, loss, liability or expense incurred in connection with the Plan or any Award, or (ii) because of any contract or other instrument executed with respect to the Plan in his or her capacity as a member of the Committee, director, officer, other employee or agent of the Company or any Affiliate of the Company. The Company will indemnify and hold harmless each member of the Committee, director, officer, other employee and agent of the Company that has been or will be granted or delegated any duty or power relating to the Plan's administration or interpretation, against any cost or expense (including, without limitation, reasonable attorneys' fees) or liability (including, without limitation, any sum paid in settlement of a claim with the Committee's approval) arising from any act or omission concerning this Plan, unless arising from such person's own fraud or bad faith, to the fullest extent permitted by law, any indemnification agreement and under any directors' and officers' liability insurance coverage which may be in effect from time to time.

32. **Invalid Provisions**. In the event that any provision of this Plan is found to be invalid or otherwise unenforceable under any applicable law, such invalidity or unenforceability will not be construed as rendering any other provisions contained herein as invalid or unenforceable, and all such other provisions will be given full force and effect to the same extent as though the invalid or unenforceable provision was not contained herein.

33. **Term**. No Award shall be granted pursuant to this Plan more than 10 years after the earlier of (a) the date on which this Plan is first approved by the stockholders of the Company, or (b) the date the Plan is adopted by the Committee, but Awards granted prior to such date shall continue in effect thereafter subject to the terms thereof and of this Plan.

34. **Notices**. Any notice to be given to the Company pursuant to the provisions of the Plan will be given by registered or certified mail, postage prepaid, and, addressed, if to the Company to its Secretary (or such other person as the Company may designate in writing from time to time) at its principal executive office, and, if to a Participant, to the address given beneath his or her signature on his or her Award Agreement, or at such other address as such Participant may hereafter designate in writing to the Company. Any such notice will be deemed duly given on the date and at the time delivered via personal, courier or recognized overnight delivery service or on the date 5 days after the date of the mailing (which will be by regular, registered or certified mail).

Exhibit 10.10

MAIA BIOTECHNOLOGY, INC.
2021 EQUITY INCENTIVE PLAN

ARTICLE I
PURPOSE

The purpose of this MAIA Biotechnology, Inc. 2021 Equity Incentive Plan (the "Plan") is to benefit MAIA Biotechnology, Inc., a Delaware corporation (the "Company") and its stockholders, by assisting the Company and its subsidiaries to attract, retain and provide incentives to key management employees, directors, and consultants of the Company and its Affiliates, and to align the interests of such service providers with those of the Company's stockholders. Accordingly, the Plan provides for the granting of Non-qualified Stock Options, Incentive Stock Options, Restricted Stock Awards, Restricted Stock Unit Awards, Stock Appreciation Rights, Performance Stock Awards, Performance Unit Awards, Unrestricted Stock Awards, Distribution Equivalent Rights or any combination of the foregoing.

ARTICLE II
DEFINITIONS

The following definitions shall be applicable throughout the Plan unless the context otherwise requires:

2.1 "Affiliate" shall mean (i) any person or entity that directly or indirectly controls, is controlled by or is under common control with the Company and/or (ii) to the extent provided by the Committee, any person or entity in which the Company has a significant interest. The term "control" (including, with correlative meaning, the terms "controlled by" and "under common control with"), as applied to any person or entity, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such person or entity, whether through the ownership of voting or other securities, by contract or otherwise..

2.2 "Award" shall mean, individually or collectively, any Option, Restricted Stock Award, Restricted Stock Unit Award, Performance Stock Award, Performance Unit Award, Stock Appreciation Right, Distribution Equivalent Right or Unrestricted Stock Award.

2.3 "Award Agreement" shall mean a written agreement between the Company and the Holder with respect to an Award, setting forth the terms and conditions of the Award, as amended.

2.4 "Board" shall mean the Board of Directors of the Company.

2.5 "Base Value" shall have the meaning given to such term in Section 14.2.

2.6 "Cause" shall mean (i) if the Holder is a party to an employment or service agreement with the Company or an Affiliate which agreement defines "Cause" (or a

similar term), "Cause" shall have the same meaning as provided for in such agreement, or (ii) for a Holder who is not a party to such an agreement, "Cause" shall mean termination by the Company or an Affiliate of the employment (or other service relationship) of the Holder by reason of the Holder's (A) intentional failure to perform reasonably assigned duties, (B) dishonesty or willful misconduct in the performance of the Holder's duties, (C) involvement in a transaction which is materially adverse to the Company or an Affiliate, (D) breach of fiduciary duty involving personal profit, (E) willful violation of any law, rule, regulation or court order (other than misdemeanor traffic violations and misdemeanors not involving misuse or misappropriation of money or property), (F) commission of an act of fraud or intentional misappropriation or conversion of any asset or opportunity of the Company or an Affiliate, or (G) material breach of any provision of the Plan or the Holder's Award Agreement or any other written agreement between the Holder and the Company or an Affiliate, in each case as determined in good faith by the Board, the determination of which shall be final, conclusive and binding on all parties.

2.7 "Change of Control" shall mean, except as otherwise provided in an Award Agreement, (i) for a Holder who is a party to an employment or consulting agreement with the Company or an Affiliate which agreement defines "Change of Control" (or a similar term), "Change of Control" shall have the same meaning as provided for in such agreement, or (ii) for a Holder who is not a party to such an agreement, "Change of Control" shall mean the satisfaction of any one or more of the following conditions (and the "Change of Control" shall be deemed to have occurred as of the first day that any one or more of the following conditions shall have been satisfied):

(a) Any person (as such term is used in paragraphs 13(d) and 14(d)(2) of the Exchange Act, hereinafter in this definition, "Person"), other than the Company or an Affiliate or an employee benefit plan of the Company or an Affiliate, becomes the beneficial owner (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing more than fifty percent (50%) of the combined voting power of the Company's then outstanding securities;

(b) The closing of a merger, consolidation or other business combination (a "Business Combination") other than a Business Combination in which holders of the Shares immediately prior to the Business Combination have substantially the same proportionate ownership of the common stock or ordinary shares, as applicable, of the surviving corporation immediately after the Business Combination as immediately before;

(c) The closing of an agreement for the sale or disposition of all or substantially all of the Company's assets to any entity that is not an Affiliate;

(d) The approval by the holders of shares of Shares of a plan of complete liquidation of the Company, other than a merger of the Company into any subsidiary or a liquidation as a result of which persons who were stockholders of the Company immediately prior to such liquidation have substantially the same proportionate

ownership of shares of common stock or ordinary shares, as applicable, of the surviving corporation immediately after such liquidation as immediately before; or

(e) Within any twenty-four (24) month period, the Incumbent Directors shall cease to constitute at least a majority of the Board or the board of directors of any successor to the Company; provided, however, that any director elected to the Board, or nominated for election, by a majority of the Incumbent Directors then still in office, shall be deemed to be an Incumbent Director for purposes of this paragraph (e), but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of either an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of an individual, entity or "group" other than the Board (including, but not limited to, any such assumption that results from paragraphs (a), (b), (c), or (d) of this definition).

Notwithstanding the foregoing, solely for the purpose of determining the timing of any payments pursuant to any Award constituting a "deferral of compensation" subject to Code Section 409A, a Change of Control shall be limited to a "change in the ownership of the Company," a "change in the effective control of the Company," or a "change in the ownership of a substantial portion of the assets of the Company" as such terms are defined in Section 1.409A-3(i)(5) of the U.S. Treasury Regulations.

2.8 "Code" shall mean the Internal Revenue Code of 1986, as amended, and any successor thereto. Reference in the Plan to any section of the Code shall be deemed to include any regulations or other interpretative guidance under such section, and any amendments or successor provisions to such section, regulations or guidance.

2.9 "Committee" shall mean a committee comprised of two (2) or more members of the Board who are selected by the Board as provided in Section 4.1.

2.10 "Company" shall have the meaning given to such term in the introductory paragraph, including any successor thereto.

2.11 "Consultant" shall mean any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated for such services. However, service solely as a Director, or payment of a fee for such service, will not cause a Director to be considered a "Consultant" for purposes of the Plan. Notwithstanding the foregoing, a person is treated as a Consultant under this Plan only if a Form S-8 Registration Statement under the Securities Act is available to register either the offer or the sale of the Company's securities to such person.

2.12 "Director" shall mean a member of the Board or a member of the board of directors of an Affiliate, in either case, who is not an Employee.

2.13 "Distribution Equivalent Right" shall mean an Award granted under Article XIII of the Plan which entitles the Holder to receive bookkeeping credits, cash

payments and/or Share distributions equal in amount to the distributions that would have been made to the Holder had the Holder held a specified number of Shares during the period the Holder held the Distribution Equivalent Right.

2.14 "Distribution Equivalent Right Award Agreement" shall mean a written agreement between the Company and a Holder with respect to a Distribution Equivalent Right Award.

2.15 "Effective Date" shall mean [, 2021].

2.16 "Employee" shall mean any employee, including any officer, of the Company or an Affiliate.

2.17 "Exchange Act" shall mean the United States of America Securities Exchange Act of 1934, as amended.

2.18 "Fair Market Value" shall mean, as of any date, the value of a share of Stock determined as follows:

(a) If the Stock is listed on any established stock exchange or a national market system, the per share closing sales price for shares of Stock (or the closing bid, if no sales were reported) as quoted on such exchange or system on the day of determination, as reported in *The Wall Street Journal* or such other source as the Committee deems reliable;

(b) If the Stock is regularly quoted by a recognized securities dealer but selling prices are not reported, the Fair Market Value of a share of Stock will be the mean between the high bid and low asked per share prices for the Stock on the day of determination, as reported in *The Wall Street Journal* or such other source as the Committee deems reliable; or

(c) In the absence of an established market for the Stock, the Fair Market Value will be determined in good faith by the Committee (acting on the advice of an Independent Third Party, should the Committee elect in its sole discretion to utilize an Independent Third Party for this purpose).

(d) Notwithstanding the foregoing, the determination of Fair Market Value in all cases shall be in accordance with the requirements set forth under Section 409A of the Code to the extent necessary for an Award to comply with, or be exempt from, Section 409A of the Code.

2.19 "Family Member" of an individual shall mean any child, stepchild, grandchild, parent, stepparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law or sister-in-law, including adoptive relationships, any person sharing the Holder's household (other than a tenant or employee of the Holder), a trust in which such persons have more than fifty percent (50%) of the beneficial interest, a foundation in which such persons (or the Holder) control the management of assets, and any other entity in which such persons (or the Holder) own more than fifty percent (50%) of the voting interests.

2.20 "Holder" shall mean an Employee, Director or Consultant who has been granted an Award or any such individual's beneficiary, estate or representative, who has acquired such Award in accordance with the terms of the Plan, as applicable.

2.21 "Incentive Stock Option" shall mean an Option which is designated by the Committee as an "incentive stock option" and conforms to the applicable provisions of Section 422 of the Code.

2.22 "Incumbent Director" shall mean, with respect to any period of time specified under the Plan for purposes of determining whether or not a Change of Control has occurred, the individuals who were members of the Board at the beginning of such period.

2.23 "Independent Third Party" means an individual or entity independent of the Company having experience in providing investment banking or similar appraisal or valuation services and with expertise generally in the valuation of securities or other property for purposes of this Plan. The Committee may utilize one or more Independent Third Parties.

2.24 "Non-qualified Stock Option" shall mean an Option which is not designated by the Committee as an Incentive Stock Option.

2.25 "Option" shall mean an Award granted under Article VII of the Plan of an option to purchase Shares and shall include both Incentive Stock Options and Non-qualified Stock Options.

2.26 "Option Agreement" shall mean a written agreement between the Company and a Holder with respect to an Option.

2.27 "Performance Criteria" shall mean the criteria selected by the Committee for purposes of establishing the Performance Goal(s) for a Holder for a Performance Period.

2.28 "Performance Goals" shall mean, for a Performance Period, the written goal or goals established by the Committee for the Performance Period based upon the Performance Criteria, which may be related to the performance of the Holder, the Company or an Affiliate.

2.29 "Performance Period" shall mean one or more periods of time, which may be of varying and overlapping durations, selected by the Committee, over which the attainment of the Performance Goals shall be measured for purposes of determining a Holder's right to, and the payment of, a Performance Stock Award or a Performance Unit Award.

2.30 "Performance Stock Award" or "Performance Stock" shall mean an Award granted under Article XII of the Plan under which, upon the satisfaction of predetermined Performance Goals, Shares are paid to the Holder.

2.31 "Performance Stock Agreement" shall mean a written agreement between the Company and a Holder with respect to a Performance Stock Award.

2.32 "Performance Unit Award" or "Performance Unit" shall mean an Award granted under Article XI of the Plan under which, upon the satisfaction of predetermined Performance Goals, a cash payment shall be made to the Holder, based on the number of Units awarded to the Holder.

2.33 "Performance Unit Agreement" shall mean a written agreement between the Company and a Holder with respect to a Performance Unit Award.

2.34 "Plan" shall mean this MAIA Biotechnology, Inc. 2021 Equity Incentive Plan, as amended from time to time, together with each of the Award Agreements utilized hereunder.

2.35 "Restricted Stock Award" and "Restricted Stock" shall mean an Award granted under Article VIII of the Plan of Shares, the transferability of which by the Holder is subject to Restrictions.

2.36 "Restricted Stock Agreement" shall mean a written agreement between the Company and a Holder with respect to a Restricted Stock Award.

2.37 "Restricted Stock Unit Award" and "RSUs" shall refer to an Award granted under Article X of the Plan under which, upon the satisfaction of predetermined individual service-related vesting requirements, a payment in cash or Shares shall be made to the Holder, based on the number of Units awarded to the Holder.

2.38 "Restricted Stock Unit Agreement" shall mean a written agreement between the Company and a Holder with respect to a Restricted Stock Award.

2.39 "Restriction Period" shall mean the period of time for which Shares subject to a Restricted Stock Award shall be subject to Restrictions, as set forth in the applicable Restricted Stock Agreement.

2.40 "Restrictions" shall mean the forfeiture, transfer and/or other restrictions applicable to Shares awarded to an Employee, Director or Consultant under the Plan pursuant to a Restricted Stock Award and set forth in a Restricted Stock Agreement.

2.41 "Rule 16b-3" shall mean Rule 16b-3 promulgated by the Securities and Exchange Commission under the Exchange Act, as such may be amended from time to time, and any successor rule, regulation or statute fulfilling the same or a substantially similar function.

2.42 "Shares" or "Stock" shall mean the common stock of the Company, par value $0.0001 per share.

2.43 "Stock Appreciation Right" or "SAR" shall mean an Award granted under Article XIV of the Plan of a right, granted alone or in connection with a related Option, to receive a payment equal to the increase in value of a specified number of Shares between the date of Award and the date of exercise.

2.44 "Stock Appreciation Right Agreement" shall mean a written agreement between the Company and a Holder with respect to a Stock Appreciation Right.

2.45 "Tandem Stock Appreciation Right" shall mean a Stock Appreciation Right granted in connection with a related Option, the exercise of some or all of which results in termination of the entitlement to purchase some or all of the Shares under the related Option, all as set forth in Article XIV.

2.46 "Ten Percent Stockholder" shall mean an Employee who, at the time an Option is granted to him or her, owns shares possessing more than ten percent (10%) of the total combined voting power of all classes of shares of the Company or of any parent corporation or subsidiary corporation thereof (both as defined in Section 424 of the Code), within the meaning of Section 422(b)(6) of the Code.

2.47 "Termination of Service" shall mean a termination of a Holder's employment with, or status as a Director or Consultant of, the Company or an Affiliate, as applicable, for any reason, including, without limitation, Total and Permanent Disability or death, except as provided in Section 6.4. In the event Termination of Service shall constitute a payment event with respect to any Award subject to Code Section 409A, Termination of Service shall only be deemed to occur upon a "separation from service" as such term is defined under Code Section 409A and applicable authorities.

2.48 "Total and Permanent Disability" of an individual shall mean the inability of such individual to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than twelve (12) months, within the meaning of Section 22(e)(3) of the Code.

2.49 "Unit" shall mean a bookkeeping unit, which represents such monetary amount as shall be designated by the Committee in each Performance Unit Agreement, or represents one Share for purposes of each Restricted Stock Unit Award.

2.50 "Unrestricted Stock Award" shall mean an Award granted under Article IX of the Plan of Shares which are not subject to Restrictions.

2.51 "Unrestricted Stock Agreement" shall mean a written agreement between the Company and a Holder with respect to an Unrestricted Stock Award.

ARTICLE III
EFFECTIVE DATE OF PLAN

The Plan shall be effective as of the Effective Date, provided that the Plan is approved by the stockholders of the Company within twelve (12) months of such date.

ARTICLE IV
ADMINISTRATION

4.1 Composition of Committee. The Plan shall be administered by the Committee, which shall be appointed by the Board. If necessary, in the Board's discretion, to comply with Rule 16b-3 under the Exchange Act or relevant securities exchange or inter-dealer quotation service, the Committee shall consist solely of two (2) or more Directors who are each (i) "non-employee directors" within the meaning of Rule 16b-3 and (ii) "independent" for purposes of any applicable listing requirements. If a member of the Committee shall be eligible to receive an Award under the Plan, such Committee member shall have no authority hereunder with respect to his or her own Award.

4.2 Powers. Subject to the other provisions of the Plan, the Committee shall have the sole authority, in its discretion, to make all determinations under the Plan, including but not limited to (i) determining which Employees, Directors or Consultants shall receive an Award, (ii) the time or times when an Award shall be made (the date of grant of an Award shall be the date on which the Award is awarded by the Committee), (iii) what type of Award shall be granted, (iv) the term of an Award, (v) the date or dates on which an Award vests, (vi) the form of any payment to be made pursuant to an Award, (vii) the terms and conditions of an Award (including the forfeiture of the Award, and/or any financial gain, if the Holder of the Award violates any applicable restrictive covenant thereof), (viii) the Restrictions under a Restricted Stock Award, (ix) the number of Shares which may be issued under an Award, (x) Performance Goals applicable to any Award and certification of the achievement of such goals, and (xi) the waiver of any Restrictions or Performance Goals, subject in all cases to compliance with applicable laws. In making such determinations the Committee may take into account the nature of the services rendered by the respective Employees, Directors and Consultants, their present and potential contribution to the Company's (or the Affiliate's) success and such other factors as the Committee in its discretion may deem relevant.

4.3 Additional Powers. The Committee shall have such additional powers as are delegated to it under the other provisions of the Plan. Subject to the express provisions of the Plan, the Committee is authorized to construe the Plan and the respective Award Agreements executed hereunder, to prescribe such rules and regulations relating to the Plan as it may deem advisable to carry out the intent of the Plan, to determine the terms, restrictions and provisions of each Award and to make all other determinations necessary or advisable for administering the Plan. The Committee may correct any defect or supply any omission or reconcile any inconsistency in any Award Agreement in the manner and to the extent the Committee shall deem necessary, appropriate or expedient to carry it into effect. The determinations of the Committee on

the matters referred to in this Article IV shall be conclusive and binding on the Company and all Holders.

4.4 Committee Action. Subject to compliance with all applicable laws, action by the Committee shall require the consent of a majority of the members of the Committee, expressed either orally at a meeting of the Committee or in writing in the absence of a meeting. No member of the Committee shall have any liability for any good faith action, inaction or determination in connection with the Plan.

ARTICLE V
SHARES SUBJECT TO PLAN AND LIMITATIONS THEREON

5.1 Authorized Shares. The Committee may from time to time grant Awards to one or more Employees, Directors and/or Consultants determined by it to be eligible for participation in the Plan in accordance with the provisions of Article VI. Subject to Article XV, the aggregate number of shares of common stock reserved and available for grant and issuance under the Plan is [_____][1], plus any reserved shares of common stock not issued or subject to outstanding awards granted under the Company's 2020 Plan (the "Prior Plan"). In the event that (i) any Option or other Award granted hereunder is exercised through the tendering of Stock (either actually or by attestation) or by the withholding of Stock by the Company, or (ii) tax or deduction liabilities arising from such Option or other Award are satisfied by the tendering of Stock (either actually or by attestation) or by the withholding of Stock by the Company, then in each such case the shares of Stock so tendered or withheld shall be added to the shares of Stock available for grant under the Plan on a one-for-one basis. Shares underlying Awards under this Plan or the Prior Plan that are forfeited, canceled, expire unexercised, or are settled in cash shall also be available again for issuance as Awards under the Plan.

5.2 Types of Shares. The Shares to be issued pursuant to the grant or exercise of an Award may consist of authorized but unissued Shares, Shares purchased on the open market or Shares previously issued and outstanding and reacquired by the Company.

5.3 Aggregate Incentive Stock Option Limit. Notwithstanding anything to the contrary in Section 5.1, and subject to Article XV, the aggregate maximum number of shares of Stock that may be issued pursuant to the exercise of Incentive Stock Options is equal to the aggregate number of shares of common stock reserved and available for grant and issuance under the Plan in accordance with Section 5.1.

5.4 Non-Employee Director Compensation Limit. The maximum number of shares of Stock that may be subject to an Award granted under the Plan during any single fiscal year to any non-employee director, when taken together with any cash fees paid to such non-employee director during such year in respect of his service as a non-employee

[1] The exact number of shares will be determined by the Pricing Committee of the Board prior to the closing of the IPO, which shall not be greater than 10% of the shares outstanding after the IPO on a fully-diluted basis.

director (including service as a member or chair of any committee of the Board), shall not exceed $1,000,000 in total value (calculating the value of any such Award based on the Fair Market Value on the date of grant of such Award for financial reporting purposes).

ARTICLE VI
ELIGIBILITY AND TERMINATION OF SERVICE

6.1 Eligibility. Awards made under the Plan may be granted solely to individuals who, at the time of grant, are Employees, Directors or Consultants. An Award may be granted on more than one occasion to the same Employee, Director or Consultant, and, subject to the limitations set forth in the Plan, such Award may include, a Non-qualified Stock Option, a Restricted Stock Award, a Restricted Stock Unit Award, an Unrestricted Stock Award, a Distribution Equivalent Right Award, a Performance Stock Award, a Performance Unit Award, a Stock Appreciation Right, a Tandem Stock Appreciation Right, or any combination thereof, and solely for Employees, an Incentive Stock Option.

6.2 Termination of Service. Except to the extent inconsistent with the terms of the applicable Award Agreement and/or the provisions of Section 6.3 or 6.4, the following terms and conditions shall apply with respect to a Holder's Termination of Service with the Company or an Affiliate, as applicable:

(a) The Holder's rights, if any, to exercise any then exercisable Options and/or Stock Appreciation Rights shall terminate:

(i) If such termination is for a reason other than the Holder's Total and Permanent Disability or death, ninety (90) days after the date of such Termination of Service;

(ii) If such termination is on account of the Holder's Total and Permanent Disability, one (1) year after the date of such Termination of Service; or

(iii) If such termination is on account of the Holder's death, one (1) year after the date of the Holder's death.

Upon such applicable date the Holder (and such Holder's estate, designated beneficiary or other legal representative) shall forfeit any rights or interests in or with respect to any such Options and Stock Appreciation Rights. Notwithstanding the foregoing, the Committee, in its sole discretion, may provide for a different time period in the Award Agreement, or may extend the time period, following a Termination of Service, during which the Holder has the right to exercise any vested Non-qualified Stock Option or Stock Appreciation Right, which time period may not extend beyond the expiration date of the Award term.

(b) In the event of a Holder's Termination of Service for any reason prior to the actual or deemed satisfaction and/or lapse of the Restrictions, vesting requirements, terms and conditions applicable to a Restricted Stock Award and/or Restricted Stock Unit Award, such Restricted Stock and/or RSUs shall immediately be

canceled, and the Holder (and such Holder's estate, designated beneficiary or other legal representative) shall forfeit any rights or interests in and with respect to any such Restricted Stock and/or RSUs.

6.3 Special Termination Rule. Except to the extent inconsistent with the terms of the applicable Award Agreement, and notwithstanding anything to the contrary contained in this Article VI, if a Holder's employment with, or status as a Director of, the Company or an Affiliate shall terminate, and if, within ninety (90) days of such termination, such Holder shall become a Consultant, such Holder's rights with respect to any Award or portion thereof granted thereto prior to the date of such termination may be preserved, if and to the extent determined by the Committee in its sole discretion, as if such Holder had been a Consultant for the entire period during which such Award or portion thereof had been outstanding. Should the Committee effect such determination with respect to such Holder, for all purposes of the Plan, such Holder shall not be treated as if his or her employment or Director status had terminated until such time as his or her Consultant status shall terminate, in which case his or her Award, as it may have been reduced in connection with the Holder's becoming a Consultant, shall be treated pursuant to the provisions of Section 6.2, provided, however, that any such Award which is intended to be an Incentive Stock Option shall, upon the Holder's no longer being an Employee, automatically convert to a Non-qualified Stock Option. Should a Holder's status as a Consultant terminate, and if, within ninety (90) days of such termination, such Holder shall become an Employee or a Director, such Holder's rights with respect to any Award or portion thereof granted thereto prior to the date of such termination may be preserved, if and to the extent determined by the Committee in its sole discretion, as if such Holder had been an Employee or a Director, as applicable, for the entire period during which such Award or portion thereof had been outstanding, and, should the Committee effect such determination with respect to such Holder, for all purposes of the Plan, such Holder shall not be treated as if his or her Consultant status had terminated until such time as his or her employment with the Company or an Affiliate, or his or her Director status, as applicable, shall terminate, in which case his or her Award shall be treated pursuant to the provisions of Section 6.2.

6.4 Termination of Service for Cause. Notwithstanding anything in this Article VI or elsewhere in the Plan to the contrary, and unless a Holder's Award Agreement specifically provides otherwise, in the event of a Holder's Termination of Service for Cause, all of such Holder's then outstanding Awards shall expire immediately and be forfeited in their entirety upon such Termination of Service.

ARTICLE VII
OPTIONS

7.1 Option Period. The term of each Option shall be as specified in the Option Agreement; provided, however, that except as set forth in Section 7.3, no Option shall be exercisable after the expiration of ten (10) years from the date of its grant. If the Option would expire at a time when the exercise of the Option would violate applicable securities laws, the expiration date applicable to the Option will be automatically extended to a date that is 30 calendar days following the date such exercise would no

longer violate applicable securities laws (so long as such extension shall not violate Section 409A of the Code); provided, that in no event shall such expiration date be extended beyond the expiration of the option period.

7.2 Limitations on Exercise of Option. An Option shall be exercisable in whole or in such installments and at such times as specified in the Option Agreement

7.3 Special Limitations on Incentive Stock Options. To the extent that the aggregate Fair Market Value (determined at the time the respective Incentive Stock Option is granted) of Shares with respect to which Incentive Stock Options are exercisable for the first time by an individual during any calendar year under all plans of the Company and any parent corporation or subsidiary corporation thereof (both as defined in Section 424 of the Code) which provide for the grant of Incentive Stock Options exceeds One Hundred Thousand Dollars ($100,000) (or such other individual limit as may be in effect under the Code on the date of grant), the portion of such Incentive Stock Options that exceeds such threshold shall be treated as Non-qualified Stock Options. The Committee shall determine, in accordance with applicable provisions of the Code, Treasury Regulations and other administrative pronouncements, which of a Holder's Options, which were intended by the Committee to be Incentive Stock Options when granted to the Holder, will not constitute Incentive Stock Options because of such limitation, and shall notify the Holder of such determination as soon as practicable after such determination. No Incentive Stock Option shall be granted to an Employee if, at the time the Incentive Stock Option is granted, such Employee is a Ten Percent Stockholder, unless (i) at the time such Incentive Stock Option is granted the Option price is at least one hundred ten percent (110%) of the Fair Market Value of the Shares subject to the Incentive Stock Option, and (ii) such Incentive Stock Option by its terms is not exercisable after the expiration of five (5) years from the date of grant. No Incentive Stock Option shall be granted more than ten (10) years from the earlier of the Effective Date or date on which the Plan is approved by the Company's stockholders. The designation by the Committee of an Option as an Incentive Stock Option shall not guarantee the Holder that the Option will satisfy the applicable requirements for "incentive stock option" status under Section 422 of the Code.

7.4 Option Agreement. Each Option shall be evidenced by an Option Agreement in such form and containing such provisions not inconsistent with the other provisions of the Plan as the Committee from time to time shall approve, including, but not limited to, provisions intended to qualify an Option as an Incentive Stock Option. An Option Agreement may provide for the payment of the Option price, in whole or in part, by the delivery of a number of Shares (plus cash if necessary) that have been owned by the Holder for at least six (6) months and having a Fair Market Value equal to such Option price, or such other forms or methods as the Committee may determine from time to time, in each case, subject to such rules and regulations as may be adopted by the Committee. Each Option Agreement shall, solely to the extent inconsistent with the provisions of Sections 6.2, 6.3, and 6.4, as applicable, specify the effect of Termination of Service on the exercisability of the Option. Moreover, without limiting the generality of the foregoing, a Non-qualified Stock Option Agreement may provide for a "cashless exercise" of the Option, in whole or in part, by (a) establishing procedures whereby the

Holder, by a properly-executed written notice, directs (i) an immediate market sale or margin loan as to all or a part of Shares to which he is entitled to receive upon exercise of the Option, pursuant to an extension of credit by the Company to the Holder of the Option price, (ii) the delivery of the Shares from the Company directly to a brokerage firm and (iii) the delivery of the Option price from sale or margin loan proceeds from the brokerage firm directly to the Company, or (b) reducing the number of Shares to be issued upon exercise of the Option by the number of such Shares having an aggregate Fair Market Value equal to the Option price (or portion thereof to be so paid) as of the date of the Option's exercise. An Option Agreement may also include provisions relating to: (i) subject to the provisions hereof, accelerated vesting of Options, including but not limited to, upon the occurrence of a Change of Control, (ii) tax matters (including provisions covering any applicable Employee wage withholding requirements) and (iii) any other matters not inconsistent with the terms and provisions of the Plan that the Committee shall in its sole discretion determine. The terms and conditions of the respective Option Agreements need not be identical.

7.5 Option Price and Payment. The price at which a Share may be purchased upon exercise of an Option shall be determined by the Committee; provided, however, that such Option price (i) shall not be less than the Fair Market Value of a Share on the date such Option is granted (or 110% of Fair Market Value for an Incentive Stock Option held by Ten Percent Stockholder, as provided in Section 7.3), and (ii) shall be subject to adjustment as provided in Article XV. The Option or portion thereof may be exercised by delivery of an irrevocable notice of exercise to the Company. The Option price for the Option or portion thereof shall be paid in full in the manner prescribed by the Committee as set forth in the Plan and the applicable Option Agreement, which manner, with the consent of the Committee, may include the withholding of Shares otherwise issuable in connection with the exercise of the Option. Separate share certificates shall be issued by the Company for those Shares acquired pursuant to the exercise of an Incentive Stock Option and for those Shares acquired pursuant to the exercise of a Non-qualified Stock Option.

7.6 Stockholder Rights and Privileges. The Holder of an Option shall be entitled to all the privileges and rights of a stockholder of the Company solely with respect to such Shares as have been purchased under the Option and for which share certificates have been registered in the Holder's name.

7.7 Options and Rights in Substitution for Stock or Options Granted by Other Corporations. Options may be granted under the Plan from time to time in substitution for stock options held by individuals employed by entities who become Employees, Directors or Consultants as a result of a merger or consolidation of the employing entity with the Company or any Affiliate, or the acquisition by the Company or an Affiliate of the assets of the employing entity, or the acquisition by the Company or an Affiliate of stock or shares of the employing entity with the result that such employing entity becomes an Affiliate. Any substitute Awards granted under this Plan shall not reduce the number of Shares authorized for grant under the Plan.

7.8 Prohibition Against Repricing7.9 . Except to the extent (i) approved in advance by holders of a majority of the shares of the Company entitled to vote generally in the election of directors, or (ii) as a result of any Change of Control or any adjustment as provided in Article XV, the Committee shall not have the power or authority to reduce, whether through amendment or otherwise, the exercise price under any outstanding Option or Stock Appreciation Right, or to grant any new Award or make any payment of cash in substitution for or upon the cancellation of Options and/or Stock Appreciation Rights previously granted.

ARTICLE VIII
RESTRICTED STOCK AWARDS

8.1 Award. A Restricted Stock Award shall constitute an Award of Shares to the Holder as of the date of the Award which are subject to a "substantial risk of forfeiture" as defined under Section 83 of the Code during the specified Restriction Period. At the time a Restricted Stock Award is made, the Committee shall establish the Restriction Period applicable to such Award. Each Restricted Stock Award may have a different Restriction Period, in the discretion of the Committee. The Restriction Period applicable to a particular Restricted Stock Award shall not be changed except as permitted by Section 8.2.

8.2 Terms and Conditions. At the time any Award is made under this Article VIII, the Company and the Holder shall enter into a Restricted Stock Agreement setting forth each of the matters contemplated thereby and such other matters as the Committee may determine to be appropriate. The Company shall cause the Shares to be issued in the name of Holder, either by book-entry registration or issuance of one or more stock certificates evidencing the Shares, which Shares or certificates shall be held by the Company or the stock transfer agent or brokerage service selected by the Company to provide services for the Plan. The Shares shall be restricted from transfer and shall be subject to an appropriate stop-transfer order, and if any certificate is issued, such certificate shall bear an appropriate legend referring to the restrictions applicable to the Shares. After any Shares vest, the Company shall deliver the vested Shares, in book-entry or certificated form in the Company's sole discretion, registered in the name of Holder or his or her legal representatives, beneficiaries or heirs, as the case may be, less any Shares withheld to pay withholding taxes. If provided for under the Restricted Stock Agreement, the Holder shall have the right to vote Shares subject thereto and to enjoy all other stockholder rights, including the entitlement to receive dividends on the Shares during the Restriction Period. At the time of such Award, the Committee may, in its sole discretion, prescribe additional terms and conditions or restrictions relating to Restricted Stock Awards, including, but not limited to, rules pertaining to the effect of Termination of Service prior to expiration of the Restriction Period. Such additional terms, conditions or restrictions shall, to the extent inconsistent with the provisions of Sections 6.2, 6.3 and 6.4, as applicable, be set forth in a Restricted Stock Agreement made in conjunction with the Award. Such Restricted Stock Agreement may also include provisions relating to: (i) subject to the provisions hereof, accelerated vesting of Awards, including but not limited to accelerated vesting upon the occurrence of a Change of Control, (ii) tax matters (including provisions covering any applicable Employee wage withholding requirements)

and (iii) any other matters not inconsistent with the terms and provisions of the Plan that the Committee shall in its sole discretion determine. The terms and conditions of the respective Restricted Stock Agreements need not be identical. All Shares delivered to a Holder as part of a Restricted Stock Award shall be delivered and reported by the Company or the Affiliate, as applicable, to the Holder at the time of vesting.

8.3 Payment for Restricted Stock. The Committee shall determine the amount and form of any payment from a Holder for Shares received pursuant to a Restricted Stock Award, if any, provided that in the absence of such a determination, a Holder shall not be required to make any payment for Shares received pursuant to a Restricted Stock Award, except to the extent otherwise required by law.

ARTICLE IX
UNRESTRICTED STOCK AWARDS

9.1 Award. Shares may be awarded (or sold) to Employees, Directors or Consultants under the Plan which are not subject to Restrictions of any kind, in consideration for past services rendered thereby to the Company or an Affiliate or for other valid consideration.

9.2 Terms and Conditions. At the time any Award is made under this Article IX, the Company and the Holder shall enter into an Unrestricted Stock Agreement setting forth each of the matters contemplated hereby and such other matters as the Committee may determine to be appropriate.

9.3 Payment for Unrestricted Stock. The Committee shall determine the amount and form of any payment from a Holder for Shares received pursuant to an Unrestricted Stock Award, if any, provided that in the absence of such a determination, a Holder shall not be required to make any payment for Shares received pursuant to an Unrestricted Stock Award, except to the extent otherwise required by law.

ARTICLE X
RESTRICTED STOCK UNIT AWARDS

10.1 Award. A Restricted Stock Unit Award shall constitute a promise to grant Shares (or cash equal to the Fair Market Value of Shares) to the Holder at the end of a specified vesting schedule. At the time a Restricted Stock Unit Award is made, the Committee shall establish the vesting schedule applicable to such Award. Each Restricted Stock Unit Award may have a different vesting schedule, in the discretion of the Committee. A Restricted Stock Unit shall not constitute an equity interest in the Company and shall not entitle the Holder to voting rights, dividends or any other rights associated with ownership of Shares prior to the time the Holder shall receive a distribution of Shares pursuant to Section 10.3.

10.2 Terms and Conditions. At the time any Award is made under this Article X, the Company and the Holder shall enter into a Restricted Stock Unit Agreement setting forth each of the matters contemplated thereby and such other matters as the Committee may determine to be appropriate. The Restricted Stock Unit Agreement shall

set forth the individual service-based vesting requirement which the Holder would be required to satisfy before the Holder would become entitled to distribution pursuant to Section 10.3 and the number of Units awarded to the Holder. Such conditions shall be sufficient to constitute a "substantial risk of forfeiture" as such term is defined under Section 409A of the Code. At the time of such Award, the Committee may, in its sole discretion, prescribe additional terms and conditions or restrictions relating to Restricted Stock Unit Awards in the Restricted Stock Unit Agreement, including, but not limited to, rules pertaining to the effect of Termination of Service prior to expiration of the applicable vesting period. The terms and conditions of the respective Restricted Stock Unit Agreements need not be identical.

10.3 Distributions of Shares. The Holder of a Restricted Stock Unit shall be entitled to receive Shares or a cash payment equal to the Fair Market Value of a Share, or one Share, as determined in the sole discretion of the Committee and as set forth in the Restricted Stock Unit Agreement, for each Restricted Stock Unit subject to such Restricted Stock Unit Award, if the Holder satisfies the applicable vesting requirement. Such distribution shall be made no later than by the fifteenth (15th) day of the third (3rd) calendar month next following the end of the calendar year in which the Restricted Stock Unit first becomes vested (i.e., no longer subject to a "substantial risk of forfeiture").

ARTICLE XI
PERFORMANCE UNIT AWARDS

11.1 Award. A Performance Unit Award shall constitute an Award under which, upon the satisfaction of predetermined individual and/or Company (and/or Affiliate) Performance Goals based on selected Performance Criteria, a cash payment shall be made to the Holder, based on the number of Units awarded to the Holder. At the time a Performance Unit Award is made, the Committee shall establish the Performance Period and applicable Performance Goals. Each Performance Unit Award may have different Performance Goals, in the discretion of the Committee. A Performance Unit Award shall not constitute an equity interest in the Company and shall not entitle the Holder to voting rights, dividends or any other rights associated with ownership of Shares.

11.2 Terms and Conditions. At the time any Award is made under this Article XI, the Company and the Holder shall enter into a Performance Unit Agreement setting forth each of the matters contemplated thereby and such other matters as the Committee may determine to be appropriate. The Committee shall set forth in the applicable Performance Unit Agreement the Performance Period, Performance Criteria and Performance Goals which the Holder and/or the Company would be required to satisfy before the Holder would become entitled to payment pursuant to Section 11.3, the number of Units awarded to the Holder and the dollar value or formula assigned to each such Unit. Such payment shall be subject to a "substantial risk of forfeiture" under Section 409A of the Code. At the time of such Award, the Committee may, in its sole discretion, prescribe additional terms and conditions or restrictions relating to Performance Unit Awards, including, but not limited to, rules pertaining to the effect of Termination of Service prior to expiration of the applicable performance period. The

terms and conditions of the respective Performance Unit Agreements need not be identical.

11.3 Payments. The Holder of a Performance Unit shall be entitled to receive a cash payment equal to the dollar value assigned to such Unit under the applicable Performance Unit Agreement if the Holder and/or the Company satisfy (or partially satisfy, if applicable under the applicable Performance Unit Agreement) the Performance Goals set forth in such Performance Unit Agreement. All payments shall be made no later than by the fifteenth (15th) day of the third (3rd) calendar month next following the end of the Company's fiscal year to which such performance goals and objectives relate.

ARTICLE XII
PERFORMANCE STOCK AWARDS

12.1 Award. A Performance Stock Award shall constitute a promise to grant Shares (or cash equal to the Fair Market Value of Shares) to the Holder at the end of a specified Performance Period subject to achievement of specified Performance Goals. At the time a Performance Stock Award is made, the Committee shall establish the Performance Period and applicable Performance Goals based on selected Performance Criteria. Each Performance Stock Award may have different Performance Goals, in the discretion of the Committee. A Performance Stock Award shall not constitute an equity interest in the Company and shall not entitle the Holder to voting rights, dividends or any other rights associated with ownership of Shares unless and until the Holder shall receive a distribution of Shares pursuant to Section 12.3.

12.2 Terms and Conditions. At the time any Award is made under this Article XII, the Company and the Holder shall enter into a Performance Stock Agreement setting forth each of the matters contemplated thereby and such other matters as the Committee may determine to be appropriate. The Committee shall set forth in the applicable Performance Stock Agreement the Performance Period, selected Performance Criteria and Performance Goals which the Holder and/or the Company would be required to satisfy before the Holder would become entitled to the receipt of Shares pursuant to such Holder's Performance Stock Award and the number of Shares subject to such Performance Stock Award. Such distribution shall be subject to a "substantial risk of forfeiture" under Section 409A of the Code. If such Performance Goals are achieved, the distribution of Shares (or the payment of cash, as determined in the sole discretion of the Committee), shall be made in accordance with Section 12.3, below. At the time of such Award, the Committee may, in its sole discretion, prescribe additional terms and conditions or restrictions relating to Performance Stock Awards, including, but not limited to, rules pertaining to the effect of the Holder's Termination of Service prior to the expiration of the applicable performance period. The terms and conditions of the respective Performance Stock Agreements need not be identical.

12.3 Distributions of Shares. The Holder of a Performance Stock Award shall be entitled to receive a cash payment equal to the Fair Market Value of a Share, or one Share, as determined in the sole discretion of the Committee, for each Performance Stock Award subject to such Performance Stock Agreement, if the Holder satisfies the

applicable vesting requirement. Such distribution shall be made no later than by the fifteenth (15th) day of the third (3rd) calendar month next following the end of the Company's fiscal year to which such performance goals and objectives relate.

ARTICLE XIII
DISTRIBUTION EQUIVALENT RIGHTS

13.1 Award. A Distribution Equivalent Right shall entitle the Holder to receive bookkeeping credits, cash payments and/or Share distributions equal in amount to the distributions that would have been made to the Holder had the Holder held a specified number of Shares during the specified period of the Award.

13.2 Terms and Conditions. At the time any Award is made under this Article XIII, the Company and the Holder shall enter into a Distribution Equivalent Rights Award Agreement setting forth each of the matters contemplated thereby and such other matters as the Committee may determine to be appropriate. The Committee shall set forth in the applicable Distribution Equivalent Rights Award Agreement the terms and conditions, if any, including whether the Holder is to receive credits currently in cash, is to have such credits reinvested (at Fair Market Value determined as of the date of reinvestment) in additional Shares or is to be entitled to choose among such alternatives. Such receipt shall be subject to a "substantial risk of forfeiture" under Section 409A of the Code and, if such Award becomes vested, the distribution of such cash or Shares shall be made no later than by the fifteenth (15th) day of the third (3rd) calendar month next following the end of the Company's fiscal year in which the Holder's interest in the Award vests. Distribution Equivalent Rights Awards may be settled in cash or in Shares, as set forth in the applicable Distribution Equivalent Rights Award Agreement. A Distribution Equivalent Rights Award may, but need not be, awarded in tandem with another Award (other than an Option or a SAR), whereby, if so awarded, such Distribution Equivalent Rights Award shall expire, terminate or be forfeited by the Holder, as applicable, under the same conditions as under such other Award.

13.3 Interest Equivalents. The Distribution Equivalent Rights Award Agreement for a Distribution Equivalent Rights Award may provide for the crediting of interest on a Distribution Rights Award to be settled in cash at a future date (but in no event later than by the fifteenth (15th) day of the third (3rd) calendar month next following the end of the Company's fiscal year in which such interest is credited and vested), at a rate set forth in the applicable Distribution Equivalent Rights Award Agreement, on the amount of cash payable thereunder.

ARTICLE XIV
STOCK APPRECIATION RIGHTS

14.1 Award. A Stock Appreciation Right shall constitute a right, granted alone or in connection with a related Option, to receive a payment equal to the increase in value of a specified number of Shares between the date of Award and the date of exercise.

14.2 Terms and Conditions. At the time any Award is made under this Article XIV, the Company and the Holder shall enter into a Stock Appreciation Right Agreement setting forth each of the matters contemplated thereby and such other matters as the Committee may determine to be appropriate. The Committee shall set forth in the applicable Stock Appreciation Right Agreement the terms and conditions of the Stock Appreciation Right, including (i) the base value (the "Base Value") for the Stock Appreciation Right, which shall be not less than the Fair Market Value of a Share on the date of grant of the Stock Appreciation Right, (ii) the number of Shares subject to the Stock Appreciation Right, (iii) the period during which the Stock Appreciation Right may be exercised; provided, however, that no Stock Appreciation Right shall be exercisable after the expiration of ten (10) years from the date of its grant, and (iv) any other special rules and/or requirements which the Committee imposes upon the Stock Appreciation Right. Upon the exercise of some or all of the portion of a Stock Appreciation Right, the Holder shall receive a payment from the Company, in cash or in the form of Shares having an equivalent Fair Market Value or in a combination of both, as determined in the sole discretion of the Committee, equal to the product of:

(a) The excess of (i) the Fair Market Value of a Share on the date of exercise, over (ii) the Base Value, multiplied by,

(b) The number of Shares with respect to which the Stock Appreciation Right is exercised.

14.3 Tandem Stock Appreciation Rights. If the Committee grants a Stock Appreciation Right which is intended to be a Tandem Stock Appreciation Right, the Tandem Stock Appreciation Right shall be granted at the same time as the related Option, and the following special rules shall apply:

(a) The Base Value shall be equal to or greater than the per Share exercise price under the related Option;

(b) The Tandem Stock Appreciation Right may be exercised for all or part of the Shares which are subject to the related Option, but solely upon the surrender by the Holder of the Holder's right to exercise the equivalent portion of the related Option (and when a Share is purchased under the related Option, an equivalent portion of the related Tandem Stock Appreciation Right shall be canceled);

(c) The Tandem Stock Appreciation Right shall expire no later than the date of the expiration of the related Option;

(d) The value of the payment with respect to the Tandem Stock Appreciation Right may be no more than one hundred percent (100%) of the difference between the per Share exercise price under the related Option and the Fair Market Value of the Shares subject to the related Option at the time the Tandem Stock Appreciation Right is exercised, multiplied by the number of the Shares with respect to which the Tandem Stock Appreciation Right is exercised; and

(e) The Tandem Stock Appreciation Right may be exercised solely when the Fair Market Value of the Shares subject to the related Option exceeds the per Share exercise price under the related Option.

ARTICLE XV
RECAPITALIZATION OR REORGANIZATION

15.1 Adjustments to Shares. The shares with respect to which Awards may be granted under the Plan are Shares as presently constituted; provided, however, that if, and whenever, prior to the expiration or distribution to the Holder of Shares underlying an Award theretofore granted, the Company shall effect a subdivision or consolidation of the Shares or the payment of an Share dividend on Shares without receipt of consideration by the Company, the number of Shares with respect to which such Award may thereafter be exercised or satisfied, as applicable, (i) in the event of an increase in the number of outstanding Shares, shall be proportionately increased, and the purchase price per Share shall be proportionately reduced, and (ii) in the event of a reduction in the number of outstanding Shares, shall be proportionately reduced, and the purchase price per Share shall be proportionately increased. Notwithstanding the foregoing or any other provision of this Article XV, any adjustment made with respect to an Award (x) which is an Incentive Stock Option, shall comply with the requirements of Section 424(a) of the Code, and in no event shall any adjustment be made which would render any Incentive Stock Option granted under the Plan to be other than an "incentive stock option" for purposes of Section 422 of the Code, and (y) which is a Non-qualified Stock Option, shall comply with the requirements of Section 409A of the Code, and in no event shall any adjustment be made which would render any Non-qualified Stock Option granted under the Plan to become subject to Section 409A of the Code.

15.2 Recapitalization. If the Company recapitalizes or otherwise changes its capital structure, thereafter upon any exercise or satisfaction, as applicable, of a previously granted Award, the Holder shall be entitled to receive (or entitled to purchase, if applicable) under such Award, in lieu of the number of Shares then covered by such Award, the number and class of shares and securities to which the Holder would have been entitled pursuant to the terms of the recapitalization if, immediately prior to such recapitalization, the Holder had been the holder of record of the number of Shares then covered by such Award.

15.3 Other Events. In the event of changes to the outstanding Shares by reason of an extraordinary cash dividend, reorganization, merger, consolidation, combination, split-up, spin-off, exchange or other relevant change in capitalization occurring after the date of the grant of any Award and not otherwise provided for under this Article XV, any outstanding Awards and any Award Agreements evidencing such Awards shall be adjusted by the Board in its discretion in such manner as the Board shall deem equitable or appropriate taking into consideration the applicable accounting and tax consequences, as to the number and price of Shares or other consideration subject to such Awards. In the event of any adjustment pursuant to Sections 15.1, 15.2 or this Section 15.3, the aggregate number of Shares available under the Plan pursuant to Section 5.1 may be appropriately adjusted by the Board, the determination of which shall be conclusive. In

addition, the Committee may make provision for a cash payment to a Holder or a person who has an outstanding Award.

15.4 Change of Control. The Committee may, in its sole discretion, at the time an Award is made or at any time prior to, coincident with or after the time of a Change of Control, cause any Award either (i) to be canceled in consideration of a payment in cash or other consideration in amount per share equal to the excess, if any, of the price or implied price per Share in the Change of Control over the per Share exercise, base or purchase price of such Award, which may be paid immediately or over the vesting schedule of the Award; (ii) to be assumed, or new rights substituted therefore, by the surviving corporation or a parent or subsidiary of such surviving corporation following such Change of Control; (iii) accelerate any time periods, or waive any other conditions, relating to the vesting, exercise, payment or distribution of an Award so that any Award to a Holder whose employment has been terminated as a result of a Change of Control may be vested, exercised, paid or distributed in full on or before a date fixed by the Committee; (iv) to be purchased from a Holder whose employment has been terminated as a result of a Change of Control, upon the Holder's request, for an amount of cash equal to the amount that could have been obtained upon the exercise, payment or distribution of such rights had such Award been currently exercisable or payable; or (v) terminate any then outstanding Award or make any other adjustment to the Awards then outstanding as the Committee deems necessary or appropriate to reflect such transaction or change. The number of Shares subject to any Award shall be rounded to the nearest whole number.

15.5 Powers Not Affected. The existence of the Plan and the Awards granted hereunder shall not affect in any way the right or power of the Board or of the stockholders of the Company to make or authorize any adjustment, recapitalization, reorganization or other change of the Company's capital structure or business, any merger or consolidation of the Company, any issue of debt or equity securities ahead of or affecting Shares 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.

15.6 No Adjustment for Certain Awards. Except as hereinabove expressly provided, the issuance by the Company of shares of any class or securities convertible into shares 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 previously granted Awards, and no adjustment by reason thereof shall be made with respect to the number of Shares subject to Awards theretofore granted or the purchase price per Share, if applicable.

ARTICLE XVI
AMENDMENT AND TERMINATION OF PLAN

The Plan shall continue in effect, unless sooner terminated pursuant to this Article XVI, until the tenth (10th) anniversary of the date on which it is adopted by the Board (except as to Awards outstanding on that date). The Board may amend, alter, suspend,

discontinue, or terminate the Plan or any portion thereof at any time; provided that (i) no amendment to Section 7.8 (repricing prohibitions) shall be made without stockholder approval and (ii) no such amendment, alteration, suspension, discontinuation or termination shall be made without stockholder approval if such approval is necessary to comply with any tax or regulatory requirement applicable to the Plan (including, without limitation, as necessary to comply with any rules or requirements of any securities exchange or inter-dealer quotation system on which the Stock may be listed or quoted); provided, further, that any such amendment, alteration, suspension, discontinuance or termination that would materially and adversely affect the rights of any Holder or beneficiary of any Award theretofore granted shall not to that extent be effective without the consent of the affected Holder or beneficiary (unless such change is required in order to exempt the Plan or any Award from Section 409A of the Code).

ARTICLE XVII
MISCELLANEOUS

17.1 No Right to Award. Neither the adoption of the Plan by the Company nor any action of the Board or the Committee shall be deemed to give an Employee, Director or Consultant any right to an Award except as may be evidenced by an Award Agreement duly executed on behalf of the Company, and then solely to the extent and on the terms and conditions expressly set forth therein.

17.2 No Rights Conferred. Nothing contained in the Plan shall (i) confer upon any Employee any right with respect to continuation of employment with the Company or any Affiliate, (ii) interfere in any way with any right of the Company or any Affiliate to terminate the employment of an Employee at any time, (iii) confer upon any Director any right with respect to continuation of such Director's membership on the Board, (iv) interfere in any way with any right of the Company or an Affiliate to terminate a Director's membership on the Board at any time, (v) confer upon any Consultant any right with respect to continuation of his or her consulting engagement with the Company or any Affiliate, or (vi) interfere in any way with any right of the Company or an Affiliate to terminate a Consultant's consulting engagement with the Company or an Affiliate at any time.

17.3 Other Laws; No Fractional Shares; Withholding. The Company shall not be obligated by virtue of any provision of the Plan to recognize the exercise of any Award or to otherwise sell or issue Shares in violation of any laws, rules or regulations, and any postponement of the exercise or settlement of any Award under this provision shall not extend the term of such Award. Neither the Company nor its directors or officers shall have any obligation or liability to a Holder with respect to any Award (or Shares issuable thereunder) (i) that shall lapse because of such postponement, or (ii) for any failure to comply with the requirements of any applicable law, rules or regulations, including but not limited to any failure to comply with the requirements of Section 409A of this Code. No fractional Shares shall be delivered, nor shall any cash in lieu of fractional Shares be paid. The Company shall have the right to deduct in cash (whether under this Plan or otherwise) in connection with all Awards any taxes required by law to be withheld and to require any payments required to enable it to satisfy its withholding

obligations. In the case of any Award satisfied in the form of Shares, no Shares shall be issued unless and until arrangements satisfactory to the Company shall have been made to satisfy any tax withholding obligations applicable with respect to such Award. Subject to such terms and conditions as the Committee may impose, the Company shall have the right to retain, or the Committee may, subject to such terms and conditions as it may establish from time to time, permit Holders to elect to tender, Shares (including Shares issuable in respect of an Award) to satisfy, in whole or in part, the amount required to be withheld.

17.4 No Restriction on Corporate Action. Nothing contained in the Plan shall be construed to prevent the Company or any Affiliate from taking any corporate action which is deemed by the Company or such Affiliate to be appropriate or in its best interest, whether or not such action would have an adverse effect on the Plan or any Award made under the Plan. No Employee, Director, Consultant, beneficiary or other person shall have any claim against the Company or any Affiliate as a result of any such action.

17.5 Restrictions on Transfer. No Award under the Plan or any Award Agreement and no rights or interests herein or therein, shall or may be assigned, transferred, sold, exchanged, encumbered, pledged or otherwise hypothecated or disposed of by a Holder except (i) by will or by the laws of descent and distribution, or (ii) where permitted under applicable tax rules, by gift to any Family Member of the Holder, subject to compliance with applicable laws. An Award may be exercisable during the lifetime of the Holder only by such Holder or by the Holder's guardian or legal representative unless it has been transferred by gift to a Family Member of the Holder, in which case it shall be exercisable solely by such transferee. Notwithstanding any such transfer, the Holder shall continue to be subject to the withholding requirements provided for under Section 17.3 hereof.

17.6 Beneficiary Designations. Each Holder may, from time to time, name a beneficiary or beneficiaries (who may be contingent or successive beneficiaries) for purposes of receiving any amount which is payable in connection with an Award under the Plan upon or subsequent to the Holder's death. Each such beneficiary designation shall serve to revoke all prior beneficiary designations, be in a form prescribed by the Company and be effective solely when filed by the Holder in writing with the Company during the Holder's lifetime. In the absence of any such written beneficiary designation, for purposes of the Plan, a Holder's beneficiary shall be the Holder's estate.

17.7 Rule 16b-3. It is intended that the Plan and any Award made to a person subject to Section 16 of the Exchange Act shall meet all of the requirements of Rule 16b-3. If any provision of the Plan or of any such Award would disqualify the Plan or such Award under, or would otherwise not comply with the requirements of, Rule 16b-3, such provision or Award shall be construed or deemed to have been amended as necessary to conform to the requirements of Rule 16b-3.

17.8 Clawback Policy. All Awards (including on a retroactive basis) granted under the Plan are subject to the terms of any Company forfeiture, incentive

compensation recoupment, clawback or similar policy as it may be in effect from time to time, as well as any similar provisions of applicable laws, as well as any other policy of the Company that may apply to the Awards, such as anti-hedging or pledging policies, as they may be in effect from time to time. In particular, these policies and/or provisions shall include, without limitation, (i) any Company policy established to comply with applicable laws (including, without limitation, Section 304 of the Sarbanes-Oxley Act and Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act), and/or (ii) the rules and regulations of the applicable securities exchange or inter-dealer quotation system on which the shares of Stock or other securities are listed or quoted, and these requirements shall be deemed incorporated by reference into all outstanding Award Agreements.

17.9 No Obligation to Notify or Minimize Taxes. The Company shall have no duty or obligation to any Holder to advise such Holder as to the time or manner of exercising any Award. Furthermore, the Company shall have no duty or obligation to warn or otherwise advise such Holder of a pending termination or expiration of an Award or a possible period in which the Award may not be exercised. The Company has no duty or obligation to minimize the tax consequences of an Award to any person.

17.10 Section 409A of the Code.

(a) Notwithstanding any provision of this Plan to the contrary, all Awards made under this Plan are intended to be exempt from or, in the alternative, comply with Section 409A of the Code and the authoritative guidance thereunder, including the exceptions for stock rights and short-term deferrals. The Plan shall be construed and interpreted in accordance with such intent. Each payment under an Award shall be treated as a separate payment for purposes of Section 409A of the Code.

(b) If a Holder is a "specified employee" (as such term is defined for purposes of Section 409A of the Code) at the time of his termination of service, no amount that is nonqualified deferred compensation subject to Section 409A of the Code and that becomes payable by reason of such termination of service shall be paid to the Holder (or in the event of the Holder's death, the Holder's representative or estate) before the earlier of (x) the first business day after the date that is six months following the date of the Holder's termination of service, and (y) within 30 days following the date of the Holder's death. For purposes of Section 409A of the Code, a termination of service shall be deemed to occur only if it is a "separation from service" within the meaning of Section 409A of the Code, and references in the Plan and any Award Agreement to "termination of service" or similar terms shall mean a "separation from service." If any Award is or becomes subject to Section 409A of the Code, unless the applicable Award Agreement provides otherwise, such Award shall be payable upon the Holder's "separation from service" within the meaning of Section 409A of the Code. If any Award is or becomes subject to Section 409A of the Code and if payment of such Award would be accelerated or otherwise triggered under a Change of Control, then the definition of Change of Control shall be deemed modified, only to the extent necessary to avoid the imposition of

any additional tax under Section 409A of the Code, to mean a "change in control event" as such term is defined for purposes of Section 409A of the Code.

(c) Any adjustments made pursuant to Article XV to Awards that are subject to Section 409A of the Code shall be made in compliance with the requirements of Section 409A of the Code, and any adjustments made pursuant to Article XV to Awards that are not subject to Section 409A of the Code shall be made in such a manner as to ensure that after such adjustment, the Awards either (x) continue not to be subject to Section 409A of the Code or (y) comply with the requirements of Section 409A of the Code.

17.11 Indemnification. Each person who is or shall have been a member of the Committee or of the Board shall be indemnified and held harmless by the Company against and from any loss, cost, liability, or expense that may be imposed upon or reasonably incurred thereby in connection with or resulting from any claim, action, suit, or proceeding to which such person may be made a party or may be involved by reason of any action taken or failure to act under the Plan and against and from any and all amounts paid thereby in settlement thereof, with the Company's approval, or paid thereby in satisfaction of any judgment in any such action, suit, or proceeding against such person; provided, however, that such person shall give the Company an opportunity, at its own expense, to handle and defend the same before he or she undertakes to handle and defend it on his or her own behalf. The foregoing right of indemnification shall not be exclusive and shall be independent of any other rights of indemnification to which such persons may be entitled under the Company's Articles of Incorporation or By-laws, by contract, as a matter of law, or otherwise.

17.12 Other Benefit Plans. No Award, payment or amount received hereunder shall be taken into account in computing an Employee's salary or compensation for the purposes of determining any benefits under any pension, retirement, life insurance or other benefit plan of the Company or any Affiliate, unless such other plan specifically provides for the inclusion of such Award, payment or amount received. Nothing in the Plan shall be construed to limit the right of the Company to establish other plans or to pay compensation to its employees, in cash or property, in a manner which is not expressly authorized under the Plan.

17.13 Limits of Liability. Any liability of the Company with respect to an Award shall be based solely upon the contractual obligations created under the Plan and the Award Agreement. None of the Company, any member of the Board nor any member of the Committee shall have any liability to any party for any action taken or not taken, in good faith, in connection with or under the Plan.

17.14 Governing Law. Except as otherwise provided herein, the Plan shall be governed by and construed in accordance with the internal laws of the State of Delaware applicable to contracts made and performed wholly within the State of Delaware, without giving effect to the conflict of law provisions thereof.

17.15 Subplans. 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 the Plan setting forth (i) such limitations on the Committee's discretion under the Plan as the Board deems necessary or desirable and (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 Holders within the affected jurisdiction and the Company shall not be required to provide copies of any supplement to Holders in any jurisdiction that is not affected.

17.16 Notification of Election Under Section 83(b) of the Code. If any Holder, in connection with the acquisition of Stock under an Award, makes the election permitted under Section 83(b) of the Code, if applicable, the Holder shall notify the Company of the election within ten days of filing notice of the election with the Internal Revenue Service.

17.17 Paperless Administration. If the Company establishes, for itself or using the services of a third party, an automated system for the documentation, granting or exercise of Awards, such as a system using an internet website or interactive voice response, then the paperless documentation, granting or exercise of Awards by a Holder may be permitted through the use of such an automated system.

17.18 Broker-Assisted Sales. In the event of a broker-assisted sale of Stock in connection with the payment of amounts owed by a Holder under or with respect to the Plan or Awards: (a) any Stock to be sold through the broker-assisted sale will be sold on the day the payment first becomes due, or as soon thereafter as practicable; (b) the Stock may be sold as part of a block trade with other Holders in the Plan in which all participants receive an average price; (c) the applicable Holder will be responsible for all broker's fees and other costs of sale, and by accepting an Award, each Holder agrees to indemnify and hold the Company harmless from any losses, costs, damages, or expenses relating to any such sale; (d) to the extent the Company or its designee receives proceeds of the sale that exceed the amount owed, the Company will pay the excess in cash to the applicable Holder as soon as reasonably practicable; (e) the Company and its designees are under no obligation to arrange for the sale at any particular price; and (f) if the proceeds of the sale are insufficient to satisfy the Holder's applicable obligation, the Holder may be required to pay immediately upon demand to the Company or its designee an amount in cash sufficient to satisfy any remaining portion of the Holder's obligation.

17.19 Data Privacy. As a condition for receiving any Award, each Holder explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of personal data as described in this Section 17.19 by and among the Company and its subsidiaries and Affiliates exclusively for implementing, administering and managing the Holder's participation in the Plan. The Company and its subsidiaries and Affiliates may hold certain personal information about a Holder, including the Holder's name, address and telephone number; birthdate; social security, insurance number or other identification number; salary; nationality; job title(s); any Stock held in

the Company or its subsidiaries and Affiliates; and Award details, to implement, manage and administer the Plan and Awards (the "Data"). The Company and its subsidiaries and Affiliates may transfer the Data amongst themselves as necessary to implement, administer and manage a Holder's participation in the Plan, and the Company and its subsidiaries and Affiliates may transfer the Data to third parties assisting the Company with Plan implementation, administration and management. These recipients may be located in the Holder's country, or elsewhere, and the Holder's country may have different data privacy laws and protections than the recipients' country. By accepting an Award, each Holder authorizes the recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, to implement, administer and manage the Holder's participation in the Plan, including any required Data transfer to a broker or other third party with whom the Company or the Holder may elect to deposit any Stock. The Data related to a Holder will be held only as long as necessary to implement, administer, and manage the Holder's participation in the Plan. A Holder may, at any time, view the Data that the Company holds regarding the Holder, request additional information about the storage and processing of the Data regarding the Holder, recommend any necessary corrections to the Data regarding the Holder or refuse or withdraw the consents in this Section 17.19 in writing, without cost, by contacting the local human resources representative. The Company may cancel Holder's ability to participate in the Plan and, in the Committee's discretion, the Holder may forfeit any outstanding Awards if the Holder refuses or withdraws the consents in this Section 17.19.

17.20 Severability of Provisions. If any provision of the Plan is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provision of the Plan, and the Plan shall be construed and enforced as if such invalid or unenforceable provision had not been included in the Plan.

17.21 No Funding. The Plan shall be unfunded. The Company shall not be required to establish any special or separate fund or to make any other segregation of funds or assets to ensure the payment of any Award. Prior to receipt of Shares or a cash distribution pursuant to the terms of an Award, such Award shall represent an unfunded unsecured contractual obligation of the Company and the Holder shall have no greater claim to the Shares underlying such Award or any other assets of the Company or Affiliate than any other unsecured general creditor.

17.22 Headings. Headings used throughout the Plan are for convenience only and shall not be given legal significance.

Exhibit 14.1

CODE OF BUSINESS CONDUCT AND ETHICS
OF
MAIA BIOTECHNOLOGY, INC.

Adopted: November 5, 2021

The Board of Directors (the "Board") of MAIA Biotechnology, Inc. (the "Company") has adopted this Code of Business Conduct and Ethics (this "Code") to provide value for our stockholders; and

- To encourage honest and ethical conduct, including fair dealing and the ethical handling of conflicts of interest;
- To promote accurate, fair and timely reporting of the Company's financial results and condition and other information the Company releases to the public market in reports it files with the Securities and Exchange Commission (the "SEC");
- To comply with applicable laws and governmental rules and regulations;
- To prompt internal reporting of violations of this Code;
- To protect the Company's legitimate business interests, including corporate opportunities, assets and confidential information; and
- To deter wrongdoing.

All directors, officers, employees and independent contractors of the Company are expected to be familiar with this Code and to adhere to the principles and procedures set forth in this Code. For purposes of this Code, all directors, officers, employees and independent contractors are referred to collectively as "employees" or "you" throughout this Code.

A. Honest and Ethical Conduct

All directors, officers, employees and independent contractors owe duties to the Company to act with integrity. Integrity requires, among other things, being honest and ethical. This includes the ethical handling of actual or apparent conflicts of interest between personal and professional relationships.

All directors, officers, employees and independent contractors have the following duties:

- To conduct business with professional courtesy and integrity, and act honestly and fairly without prejudice in all commercial dealings;
- To work in a safe, healthy and efficient manner, using skills, time and experience to the maximum of abilities;
- To comply with applicable Company policies and job requirements, and adhere to a high standard of business ethics;
- To observe laws, governmental rules, regulations and accounting standards;
- To deal fairly with the Company's customers, suppliers, competitors and employees, and not take unfair advantage of anyone through manipulation, concealment, abuse of privileged information, misrepresentation of material facts, or any other unfair dealings.
- To achieve responsible use of and control over all assets and resources employed or entrusted.
- To maintain the confidentiality of information where required or consistent with Company policies; and

- Not to disclose information or documents relating to the Company or its business, other than as required by law, not to make any unauthorized public comment on Company affairs and not to misuse any information about the Company or its associates, and not to accept improper or undisclosed material personal benefits from third parties as a result of any transaction or transactions of the Company.

B. Conflicts of Interest

A "conflict of interest" arises when an individual's personal interest interferes or appears to interfere with the interests of the Company. A conflict of interest can arise when a director, officer or employee takes actions or has personal interests that may make it difficult to perform his or her Company work objectively and effectively. Conflicts of interest should be avoided.

There are a variety of situations in which a conflict of interest may arise. While it would be impractical to attempt to list all possible situations, some common types of conflicts may be:

- To serve as a director, employee or contractor for a company that has a business relationship with, or is a competitor of the Company;
- To enter into any financial transaction, arrangement, or relationship that is beyond the ordinary course of business, involving the Company;
- To have a financial interest in a competitor, supplier or customer of the Company;
- To receive improper personal benefits from a competitor, supplier or customer, as a result of any transaction or transactions of the Company;
- To accept financial interest beyond entertainment or nominal gifts in the ordinary course of business, such as a meal or a coffee mug; or
- To use for personal gain, rather than for the benefit of the Company, an opportunity that is offered to you solely in your capacity as an employee, officer or director of the Company and that is one that the Company is legally and contractually permitted to undertake and that is otherwise reasonable for the Company to pursue.

In most cases, anything that would constitute a conflict for a director, officer or employee also would present a conflict if it is related to a member of his or her family.

Interests in other companies, including potential competitors and suppliers, that are purely for management of the other entity, or where an otherwise questionable relationship is disclosed to the Board and any necessary action is taken to ensure there will be no effect on the Company, are not considered conflicts unless otherwise determined by the Board.

Evaluating whether a conflict of interest exists can be difficult and may involve a number of considerations. We also encourage you to seek guidance from our General Counsel when you have any questions or doubts.

C. Related-Party Transactions

The Company shall strive to avoid, wherever possible, all Related-Party Transactions (as defined below) that could result in actual or potential conflicts of interests, except if in accordance with the approval process and guidelines included below.

"Related-Party Transactions" are defined as transactions in which (1) the aggregate amount involved will or may be expected to exceed $120,000 in any calendar year, (2) the Company or any of the Company's subsidiaries is a participant, and (3) any (a) executive officer, director or nominee for election as a director, (b) greater than 5% beneficial owner of the Company's common stock, or (c) immediate family member, of the persons referred to in clauses (a) and (b) (each, a "Related Party"), has or will have a direct or indirect material interest (other than solely as a result of being a director or a less than 10% beneficial owner of another entity).

Approval Process and Guidelines.

- Each director and executive officer shall identify, any Related-Party Transaction involving a Related Party and inform the Audit Committee of the Board (the "Audit Committee") before the Company may engage in the transaction with a Related Party. Each of the Company's directors and officers shall complete a directors' and officers' questionnaire that elicits information about Related-Party Transactions.

- In the event that the Company proposes to enter into, or materially amend, a Related-Party Transaction, the General Counsel shall present such Related-Party Transaction to the Audit Committee for review and consideration.

- Any Related-Party Transaction, if not a Related-Party Transaction when originally consummated, or if not initially identified as a Related-Party Transaction prior to consummation, shall be submitted to the Audit Committee for review as soon as reasonably practicable.

D. Disclosure

Each director, officer or employee, to the extent involved in the Company's disclosure process, including the Chief Executive Officer or Chief Financial Officer is required to be familiar with the Company's disclosure controls and procedures applicable to him or her so that the Company's public reports and documents comply in all material respects with the applicable securities laws and rules. In addition, each such person having direct or supervisory authority regarding these securities filings or the Company's other public communications concerning its general business, results, financial condition and prospects should, to the extent appropriate within his or her area of responsibility, consult with other Company officers and employees and take other appropriate steps regarding these disclosures with the goal of making full, fair, accurate, timely and understandable disclosures.

Each director, officer or employee, to the extent involved in the Company's disclosure process must:

- Familiarize himself or herself with the disclosure requirements applicable to the Company as well as the business and financial operations of the Company.

- Not knowingly misrepresent, or cause others to misrepresent, facts about the Company to others, whether within or outside the Company, including to the Company's independent auditors, governmental regulators and self-regulatory organizations.

E. Compliance

It is the Company's policy to comply with all applicable laws, rules and regulations. It is the responsibility of each employee, officer and director to adhere to the standards and restrictions imposed by those laws, rules and regulations in the performance of their duties for the Company, including those relating to accounting and auditing matters and insider trading.

The Board endeavors to ensure that the directors, officers and employees of the Company act with integrity and observe the highest standards of behavior and business ethics in relation to their corporate activities.

Specifically, directors, officers and employees must:

- Comply with the law;

- Act in the best interests of the Company;

- Be responsible and accountable for their actions; and

- Observe the ethical principles of fairness, honesty and truthfulness, including disclosure of potential conflicts.

Generally, it is against Company policies for any individual to profit from undisclosed information relating to the Company or any other company in violation of insider trading or other laws. Anyone who is aware of material nonpublic information relating to the Company, our customers, or other companies may not use the information to purchase or sell securities in violation of securities laws.

If you are uncertain about the legal rules involving your purchase or sale of any Company securities or any securities in companies that you are familiar with by virtue of your work for the Company, you should consult with the General Counsel before making any such purchase or sale.

F. Reporting and Accountability

The Board has the authority to interpret this Code in any particular situation. Any director, officer or employee who becomes aware of any known or suspected violation of this Code is required to notify the General Counsel promptly.

Any questions relating to how these policies should be interpreted or applied should be addressed to the General Counsel.

Each director, officer or employee must:

- Notify the General Counsel promptly of any existing or potential violation of this Code; and
- Not retaliate against any other director, officer or employee for reports of potential violations.

The Company will follow the following procedures in investigating and enforcing this Code and in reporting on the Code:

- The General Counsel, as appropriate, will take all appropriate action to investigate any violations reported. After the conclusion of an investigation of a director or executive officer, the conclusions shall be reported to the Board.
- The Board will conduct such additional investigation as it deems necessary. The Board will determine whether a director or executive officer has violated this Code. Upon being notified that a violation has occurred, the Company will take such disciplinary or preventive action as deemed appropriate, up to and including dismissal.

G. Corporate Opportunities

Employees, officers and directors are prohibited from taking (or directing to a third party) a business opportunity that is offered to them solely in their capacity as an employee, officer or director of the Company and that is one that the Company is legally and contractually permitted to undertake and that is otherwise reasonable for the Company to pursue, unless the Company has already been offered the opportunity and turned it down.

Sometimes, the line between personal and Company benefits is difficult to draw, and sometimes there are both personal and Company benefits in certain activities. Employees, officers and directors who intend to make use of Company property or services in a manner not solely for the benefit of the Company should consult beforehand with the General Counsel.

H. Confidentiality

In carrying out the Company's business, employees, independent contractors, officers and directors often learn confidential or proprietary information about the Company, its customers, suppliers, or joint venture parties. Employees, independent contractors, officers and directors must maintain the confidentiality of all information so entrusted to them, except when disclosure is authorized or legally mandated. Confidential or proprietary information of our Company, and of other companies, includes any non-public information that would be harmful to the relevant company or useful or helpful to competitors if disclosed.

I. Fair Dealing

Our core value of operating is based on responsiveness, openness, honesty and trust with our members, business partners, employees and stockholders. We do not seek competitive advantages through illegal or unethical business practices. Each employee, officer and director should endeavor to deal fairly with the Company's customers, service providers, suppliers, competitors and employees. No employee, officer or director should take unfair advantage of anyone through manipulation, concealment, abuse of privileged information, misrepresentation of material facts, or any unfair dealing practice.

J. Protection and Proper Use of Company Assets

All employees, officers and directors should protect the Company's assets and ensure their efficient use. All Company assets should be used only for legitimate business purposes. Theft, carelessness and waste have a direct impact on our profit.

K. Waivers and Amendments

From time to time, the Company may waive provisions of this Code. Any employee or director who believes that a waiver may be called for should discuss the matter with the General Counsel.

Any waiver of the Code for executive officers or directors of the Company must be approved by the Board. The Company will disclose any such waivers within four business days by filing a current report on Form 8-K with the Commission or, in cases where a Form 8-K is not required, by distributing a press release, in each case as required by Section 5610 of the Nasdaq Stock Market LLC Rules or any other applicable law or rule of any other applicable stock exchange. Alternatively, the Company may disclose any such waivers on the Company's website in a manner that satisfies the requirements of Item 5.05(c) of Form 8-K.

The Company is committed to continuously reviewing and updating its policies, and therefore reserves the right to amend this Code at any time, for any reason, subject to applicable law.

Exhibit 21.1

SUBSIDIARIES

MAIA Biotechnology Australia Pty Ltd., an Australia corporation

Exhibit 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the inclusion in this Registration Statement of MAIA Biotechnology, Inc. on Form S-1 to be filed on or about April 8, 2022 of our report dated April 8, 2022, on our audits of the financial statements as of December 31, 2021 and 2020 and for each of the years then ended. We also consent to the reference to our firm under the caption "Experts" in this Registration Statement.

/s/ EisnerAmper LLP

EISNERAMPER LLP

Iselin, NJ

April 8, 2022

Exhibit 107

Calculation of Filing Fee Tables

Form S-1
(Form Type)

MAIA BIOTECHNOLOGY, INC.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price[1][2]	Fee Rate	Amount of Registration Fee
Fees to be Paid	Equity	Common shares, $0.0001 par value per share[2]	Rule 457(o)		$	$ 15,000,000	$0.0000927	1,390.50
	Equity	Representative warrants[3]	Rule 457(g)		—	—	—	—(4)
Fees to be Paid	Equity	Common shares issuable upon the exercise of the Representative's warrants[5]	Rule 457(o)		$		$0.0000927	
	Total Offering Amounts					**$ 15,000,000**		**$ 1,390.50**
	Total Fees Previously Paid							**-**
	Total Fee Offset							**-**
	Net Fee Due							**$ 1,390.50**

(1) Includes shares of common stock of MAIA Biotechnology, Inc. (the "Company"), which the underwriters have the right to purchase to cover over-allotments. See "Underwriting."

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. The Company has not had any third-party sales and there is currently no market for the Company's common shares.

(3) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price of the securities registered hereunder to be sold by the registrant and includes the offering price of shares of common stock that the underwriters have an option to purchase to cover over-allotments, if any.

(4) No fee required pursuant to Rule 457(g).

(5) We have agreed to issue to the representative of the underwriters (the "Representative"), upon the closing of this offering, warrants to purchase up to an aggregate number of shares of our common stock (the "Representative's Warrants") in an aggregate equal to five percent (5%) of the aggregate number of shares of common stock to be issued and sold in this offering, but excluding any shares sold upon exercise of the underwriters' over-allotment option) (the "Representative's Warrants"). The Representative's Warrants are exercisable at a per share price equal to 125% of the public offering price per share of the shares of common stock sold in this offering (excluding the over-allotment option). As estimated solely for the purpose of recalculating the registration fee pursuant to Rule 457(g) under the Securities Act, the proposed maximum aggregate offering price of the Representative's Warrants is $[ ], which is equal to 125% of $[ ] (5.0% of $[ ]). See "Underwriting".