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Filed Pursuant to Rule 424(b)(4)
Registration No. 333-278003

6,875,000 Shares

Contineum Therapeutics, Inc.

Class A Common Stock

This is an initial public offering of shares of Class A common stock of Contineum Therapeutics, Inc. We are offering 6,875,000 shares of our Class A common stock.

Prior to this offering, there has been no public market for the Class A common stock. The initial public offering price per share is $16.00. Our common stock has been approved for listing on the Nasdaq Global Select Market (Nasdaq) under the symbol "CTNM".

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

Following this offering we will have two classes of common stock: Class A common stock and Class B common stock. The rights of the holders of Class A common stock and Class B common stock are identical, except with respect to voting and conversion rights. Each share of Class A common stock is entitled to one vote per share. Each share of Class B common stock is not entitled to vote and is convertible at any time into one share of Class A common stock, subject to ownership limitations provided for in our amended and restated certificate of incorporation to be in effect upon the completion of this offering. For a description of the rights of the Class A common stock and Class B common stock, please see the section titled "Description of Capital Stock" beginning on page 200 of this prospectus. We are only offering Class A common stock in this offering, and unless otherwise noted, all references in this prospectus to our "common stock" refer to our Class A common stock. The Class B common stock will not be listed for trading on any securities exchange.

See the section titled "Risk Factors" beginning on page 15 of this prospectus to read about factors you should consider before buying shares of the common stock.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial public offering price	$ 16.00	$110,000,000
Underwriting discount(1)	$ 1.12	$ 7,700,000
Proceeds, before expenses, to us	$ 14.88	$102,300,000

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

The underwriters have the option to purchase up to an additional 1,031,250 shares from us at the initial price to the public, less the underwriting discount, for 30 days after the date of this prospectus.

The underwriters expect to deliver the shares of Class A common stock against payment in New York, New York on or about April 9, 2024.

Goldman Sachs & Co. LLC **Morgan Stanley** **Stifel** **RBC Capital Markets**

The date of this prospectus is April 4, 2024.

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Through and including April 29, 2024 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

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

Neither we nor the underwriters have done anything that would permit this offering or possession or distribution of this prospectus or any free writing prospectus we may provide to you in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus and any such free writing prospectus outside of the United States.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus and is qualified in its entirety by the more detailed information and financial statements included elsewhere in this prospectus. This summary does not contain all of the information that may be important to you and your investment decision. You should carefully read this entire prospectus, including the sections titled "Risk Factors," "Special Note Regarding Forward-Looking Statements," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes. In this prospectus, unless context requires otherwise, references to "we," "us," "our," "Contineum," or the "Company" or similar terms refer to Contineum Therapeutics, Inc.

Company Overview

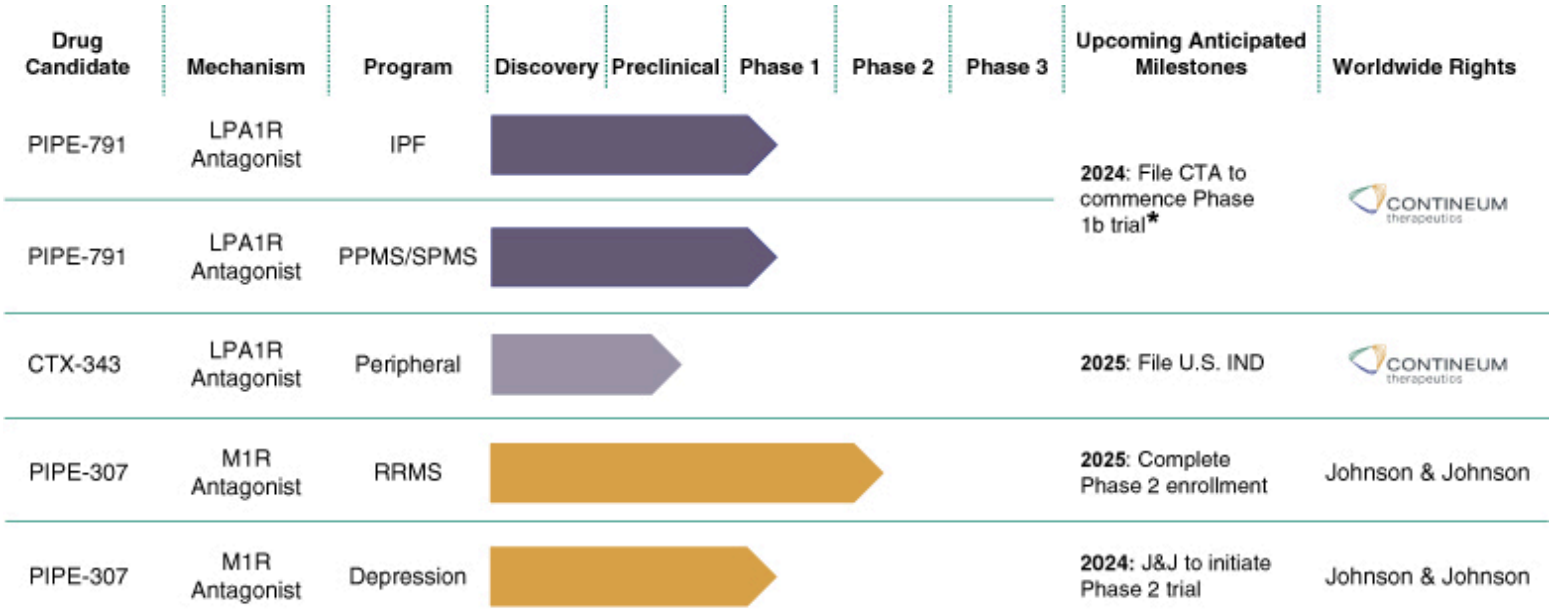
We are a clinical stage biopharmaceutical company focused on discovering and developing novel, oral small molecule therapies that target biological pathways associated with specific clinical impairments for the treatment of neuroscience, inflammation and immunology (NI&I) indications with high unmet need.

We have focused our efforts on developing selective compounds targeting challenging molecular pathways, and through these efforts, have built a portfolio of small molecule drug candidates. Our wholly-owned lead asset, PIPE-791, is a novel, brain penetrant, small molecule inhibitor of the lysophosphatidic acid 1 receptor (LPA1R) in development for idiopathic pulmonary fibrosis (IPF) and progressive multiple sclerosis (Progressive MS). LPA1R antagonism is a clinically validated mechanism, and we believe that our preclinical studies and Phase 1 healthy volunteer data support the continued development of PIPE-791 for both IPF and Progressive MS. Specifically, based on its high bioavailability, low plasma protein binding, and long receptor residence time in our preclinical studies compared to the preclinical data of other LPA1 antagonists that we know are currently in development, we also believe PIPE-791 has the potential to be a differentiated LPA1R therapy. We completed a Phase 1 clinical trial of PIPE-791 in healthy volunteers in support of clinical development in both IPF and Progressive MS. We plan to submit a Clinical Trial Authorization (CTA) to the Medicines and Healthcare products Regulatory Agency (MHRA) to commence a Phase 1b open-label trial of PIPE-791 to measure the relationship of pharmacokinetics (PK) to lung and brain receptor occupancy by positron emission tomography (PET) imaging in 2024. This Phase 1b trial will inform dose selection for our planned future Phase 2 trials of PIPE-791 in IPF and Progressive MS. Our second drug candidate, PIPE-307, is a novel, small molecule selective inhibitor of the muscarinic type 1 M1 receptor (M1R), in development for depression and relapse remitting MS (RRMS). M1R antagonism has been clinically validated in third-party trials in both depression and RRMS by scopolamine and clemastine, respectively. We have completed two Phase 1 trials of PIPE-307 in healthy volunteers and have initiated a Phase 2 trial of PIPE-307 for the potential treatment of RRMS. To our knowledge, PIPE-307 is the most clinically advanced selective M1R antagonist in development. We are developing PIPE-307 in collaboration with Johnson & Johnson (J&J).

In addition, we are leveraging our drug discovery capabilities synergistically with our clinical portfolio. In January 2024, we nominated and commenced preclinical studies for CTX-343, a peripherally-restricted (unable to cross the blood brain barrier (BBB)) LPA1R antagonist. In parallel, we are actively conducting preclinical and discovery-phase experiments targeting other NI&I indications where our internally-discovered molecules may have therapeutic potential.

Our Clinical Pipeline

We have assembled a portfolio of novel and proprietary small molecule programs that we believe can modulate innate pathways to restore function in NI&I indications, as outlined in the table below. We retain worldwide rights to our LPA1R programs and discovery portfolio, and we have partnered with J&J for the development and potential commercialization efforts of PIPE-307.



* Single Phase 1b PET clinical trial of PIPE-791 for the potential treatment of IPF and Progressive MS.

PIPE-791

Our lead asset, PIPE-791, is a novel, brain penetrant, small molecule LPA1R antagonist. We are initially developing PIPE-791 for the treatment of IPF and Progressive MS, and in parallel we are exploring the potential clinical utility of PIPE-791 in additional disorders where the LPA1 pathway has been implicated.

PIPE-791 for the Potential Treatment of IPF

We are developing PIPE-791 for the potential treatment of IPF. IPF is a rare, chronic, idiopathic interstitial lung disease (ILD), characterized by progressive fibrosis (thickening and scarring) of the lung tissue, leading to severe loss of respiratory function. The prognosis for overall survival is worse than many forms of cancer, with approximately 60% to 80% of patients dying from respiratory failure within five years of diagnosis. There are approximately 130,000 patients with IPF in the United States and three million cases worldwide as of 2017. There are two U.S. Food and Drug Administration (FDA)-approved therapies for IPF, pirfenidone (Esbriet, marketed by Genentech/Roche) and nintedanib (Ofev, marketed by Boehringer Ingelheim), but these drugs do not stop progression of IPF and have limitations related to side effects, tolerability and multi-daily dosing regimens. IPF therefore remains an area of high unmet medical need.

The lysophosphatidic acid (LPA)/LPA1R pathway is a key mediator of fibrosis. LPA is a bioactive lipid that is elevated in response to lung injury and activates LPA1R. Activation of LPA1R drives a number of cellular cascades, including fibroblast recruitment and vascular leakage, that lead to fibrosis. Inhibition of LPA1R can reduce these detrimental processes and may be a beneficial treatment for IPF. This is supported by third-party LPA1R antagonist programs, which have demonstrated clinical proof-of-concept in multiple Phase 2 clinical trials in IPF patients. Based on the dosing profile from our

preclinical studies and the PK data from our Phase 1 healthy volunteer trial, we believe PIPE-791, pending further clinical development and FDA approval, has the potential to treat IPF with once-daily dosing. In contrast, currently approved IPF therapies require multiple-daily dosing regimens.

PIPE-791 for the Potential Treatment of Progressive MS

Multiple sclerosis (MS) is a chronic immune-mediated disease of the central nervous system (CNS) characterized by neuro-inflammation and demyelination. The three main clinical categories of MS include RRMS, Secondary Progressive MS (SPMS), and Primary Progressive MS (PPMS). We are developing PIPE-791 for the potential treatment of the two later categories, SPMS and PPMS, which are collectively referred to as Progressive MS.

The three main clinical forms of MS have differences in prevalence and presentation. RRMS comprises 85% of newly diagnosed MS patients, and the clinical course is marked by relapses and remissions, defined as disease flare-ups followed by periods of partial recovery. Many RRMS patients eventually progress to worsening disease, and it is estimated that roughly 50% to 70% of diagnosed RRMS patients progress to SPMS within 10 to 15 years. PPMS is the other category that comprises Progressive MS, and it is estimated that approximately 15% of newly diagnosed MS patients fall into this clinical category which is marked by a steady course of clinical progression from the time of presentation. In 2020, the global prevalence of MS was estimated to be 2.8 million patients, and we believe that more than 750,000 of this global population have Progressive MS (i.e., the collective population of SPMS and PPMS patients). Although substantial progress has been made in the development of effective immune-modulating treatments for RRMS, many of these approved drugs have been tested in Progressive MS with almost uniformly disappointing results. The relative lack of effective therapies for Progressive MS has further justified the exploration of novel treatment approaches. In that regard, the LPA/LPA1R axis has been proposed as a potential active pathway contributing to the pathophysiology of MS. Specifically, LPA is a pro-inflammatory lipid that has been shown to be elevated in the plasma and cerebrospinal fluid (CSF) of MS patients and that may promote neuroinflammation and limit remyelination through the activation of the LPA1R.

We have demonstrated in our preclinical studies that blocking LPA1R with PIPE-791 reduces neuroinflammation and promotes remyelination. The chronic demyelination (and failure of endogenous remyelination) and chronic neuroinflammation are prominent pathological features that heavily contribute to the neurodegeneration and clinical disability in patients with Progressive MS. To our knowledge, PIPE-791 is the only brain penetrant LPA1R antagonist in clinical development for Progressive MS. Therefore, we believe PIPE-791, pending further clinical development and FDA approval, can be the first therapeutic to address chronic neuroinflammation and demyelination associated with Progressive MS.

CTX-343

In addition to PIPE-791, our brain penetrant drug candidate, we are also developing CTX-343, a peripherally-restricted LPA1R antagonist to further expand clinical indications involving LPA1R antagonism.

PIPE-307

Our second drug candidate, PIPE-307, is a novel, small molecule, selective inhibitor of M1R, which is in clinical development for the potential treatment of depression and RRMS. In February 2023, we entered into a license agreement with Johnson and Johnson Innovative Medicine (formerly Janssen

Pharmaceutica NV), an affiliate of J&J (collectively referred to herein with J&J, as J&J), under which we granted J&J an exclusive, worldwide license to develop, manufacture and commercialize PIPE-307 in all indications (J&J License Agreement). We received an upfront payment of $50.0 million, and we are eligible to receive milestone payments up to an aggregate of approximately $1.0 billion and tiered royalties in the low-double digit to high-teen percent range on future net sales of products containing PIPE-307. Additionally, we received a $25.0 million equity investment from Johnson & Johnson Innovation – JJDC, Inc. (JJDC), an affiliate of J&J. We have an opt-in right to fund a portion of all Phase 3 development costs for PIPE-307 in return for an increase in royalty rates by one to two percentage points. We are conducting a Phase 2 trial of PIPE-307 for the potential treatment of RRMS, which initiated in November 2023. In addition, J&J has the right, in its sole discretion, to further develop or elect not to develop PIPE-307 for RRMS. PIPE-307 is also in development for the potential treatment of depression, for which J&J plans to initiate a Phase 2 trial in 2024.

PIPE-307 for the Potential Treatment of Depression

Depression is one of the most common mood disorders with an approximate prevalence of 280 million people globally. Depression is associated with significant neuropsychiatric disability and increased mortality risk, and nearly 20% of U.S. adults suffer from the disorder. Despite numerous approved treatments, there remains a significant unmet medical need in the treatment of depression. It is well recognized that many patients fail to respond to currently available treatments, or the therapies are only partially effective and often associated with pronounced side effects.

Targeting the cholinergic neurotransmitter system has been established as a strategy for the treatment of depression, strongly supported by studies testing scopolamine as a potential treatment agent. Scopolamine is a non-specific antagonist of all five muscarinic receptors (M1R through M5R), and has demonstrated rapid, robust, and durable antidepressant responses in patients with major depressive disorder (MDD) and bipolar disorder (BPD). Further investigation showed that these clinical effects were specifically linked to M1R antagonism. However, the non-specific, anticholinergic properties of scopolamine lead to tolerability issues that are contraindicative in the setting of depression. With PIPE-307 being an M1R selective antagonist, we believe that the collective data support its development for the treatment of depression, while potentially avoiding off-target effects. We have demonstrated proof-of-concept in PIPE-307 preclinical studies in depression by showing improved depression-like behaviors in the Porsolt forced swim test (PST), a rodent model of depression.

PIPE-307 for the Potential Treatment of RRMS

We are also developing, in collaboration with J&J, PIPE-307 for the potential treatment of RRMS. A pathological hallmark of all forms of MS is the accumulation of demyelinating lesions that occur in the brain and spinal cord. In MS, loss of myelin leads to slower signal transmission through the axon and eventual permanent loss of neuronal function. We believe treatments targeting remyelination, and the subsequent restoration of axonal conduction, can positively impact clinical disability and address the neurodegeneration associated with RRMS. While the FDA has approved over 20 therapies for RRMS that focus on immune modulation to reduce the annual rate of relapses associated with the inflammatory aspects of the disease, none of these therapies directly promote remyelination.

Clinical proof-of-concept for M1R antagonism and remyelination in RRMS was demonstrated in a Phase 2 randomized, double-blind, placebo-controlled crossover trial to assess the efficacy of clemastine, an FDA approved H1 antihistamine and non-selective antimuscarinic compound, as a remyelinating agent in RRMS. However, the antihistamine related side effects associated with

clemastine complicate use of this drug in the MS patient population. In that regard, PIPE-307 was developed as a highly-selective M1R antagonist in order to avoid the side effects associated with broad anti-muscarinic agents.

We are currently enrolling a multi-center randomized, double-blind, placebo-controlled Phase 2 proof-of-concept trial of PIPE-307 as an adjunctive treatment in RRMS patients under FDA Investigational New Drug (IND) authorization. We designed this trial, also referred to as the VISTA study, to assess efficacy and safety in patients with RRMS and to measure multiple clinical and imaging endpoints sensitive to changes in remyelination in RRMS.

Our Competitive Strengths

We have a strong, complementary relationship between our medicinal chemistry and biology functions and a team with broad and extensive expertise, which allows us to develop drug candidates for historically difficult targets. We believe that our competitive strengths include:

- Our broad expertise of NI&I indications allows us to seek to maximize the value of our drug candidates by developing them across multiple therapeutic areas.
- Our lead drug candidate, PIPE-791, targets the LPA1R, a clinically validated target for IPF, and, we believe, pending further clinical development and FDA approval, has the potential to treat IPF with once-daily dosing.
- We are advancing a new treatment paradigm in MS, by leveraging novel pathways that have the potential to reduce neuroinflammation and support remyelination.
- We have assembled a distinguished internal team and advisors that include pioneers of LPA1 and M1 biology, with decades of expertise in drug discovery and development.

Our Strategy

Our mission is to significantly impact the clinical disability associated with NI&I diseases with small molecules designed to modulate innate pathways to restore function. We aim to accomplish our goal by implementing the following strategies:

- Execute a balanced development strategy in which we assess both external clinical validation and novel therapeutic approaches for our targets.
- Pursue clinical development of PIPE-791, a LPA1R antagonist, for the treatment of IPF, a sizeable market with high unmet need.
- Pursue clinical development of PIPE-791 in Progressive MS to address the high unmet need for a therapy that has the potential to reduce neuroinflammation and support remyelination.
- Seek to maximize the value of PIPE-791 by investigating its applicability in a broad range of NI&I disorders beyond IPF and Progressive MS.
- Support the advancement of PIPE-307 through a broad clinical development strategy through our partnership with J&J.
- Further leverage our drug discovery capabilities to build out a franchise with deliberate focus on developing therapeutics that are synergistic with our existing portfolio, including a peripherally-restricted LPA1R antagonist, CTX-343.
- Evaluate and selectively engage in strategic collaborations to maximize the potential of our pipeline.

Our Team

We have assembled a seasoned team with expertise in small molecule drug design across the fields of NI&I. Our Chief Executive Officer, Carmine Stengone, joined Contineum Therapeutics in October 2018. His previous roles include President, Chief Executive Officer and Director of Avelas Biosciences and co-founder and Chief Executive Officer of Afraxis, Inc. He also served as Senior Vice President, Business Development for COI Pharmaceuticals (now Avalon Bioventures) and a member of its investment committee, where he helped co-found six biotech companies, including two focused in neuroscience. Before that, he was with Phenomix Corporation as the Senior Director of Business Development, and previously held positions at Anadys Pharmaceuticals, Inc. and J&J. Daniel Lorrain is one of our founders and serves as our Chief Scientific Officer with over 23 years of experience in small molecule drug discovery. Previously, Dr. Lorrain was Vice President of Biology at Inception Sciences where he led all aspects of biology and nonclinical pharmacology, including for Inception 5, a remyelination company acquired by Roche. Prior to this, he was at Amira Pharmaceuticals where he led development of the LPA1 program, which was a key driver in its acquisition by Bristol-Myers Squibb. Stephen Huhn serves as our Chief Medical Officer and Senior Vice President of Clinical Development and has over 15 years of experience in clinical development for neuroscience indications. Dr. Huhn previously served as Chief Medical Officer and Vice President of Clinical Development at StemCells, Inc. (StemCells), where he led multiple clinical programs in a wide range of neurology and ophthalmology indications. Dr. Huhn is a Fellow in the American Association of Neurological Surgeons, and was Chief of Pediatric Neurosurgery at Stanford University before joining StemCells in 2007. Peter Slover is our Chief Financial Officer and previously served as Chief Financial Officer at Sophiris Bio Inc. (Sophiris), where he led Sophiris' initial public offering on the Nasdaq. Prior to that, Mr. Slover held several management positions at Anadys and spent seven years in public accounting at KPMG LLP.

Risks Related to Our Business

Our ability to execute our business strategy is subject to numerous risks, as more fully described in the section entitled "Risk Factors" immediately following this prospectus summary. These risks include, among others:

- *We are heavily dependent on the success of PIPE-791, our lead drug candidate, and PIPE-307, both of which are in the early stages of clinical development. If these drug candidates do not progress through clinical development, eventually receive regulatory approval or, even if approved, are not successfully commercialized, our business will be materially adversely harmed.*
- *Clinical drug development is a lengthy, expensive and risky process with uncertain timelines and uncertain outcomes. The results of earlier preclinical studies and clinical trials, including those conducted by third parties, may not be predictive of future results. If clinical trials for the drug candidates we develop do not meet safety or efficacy endpoints or are prolonged or delayed, these drug candidates may not receive the required regulatory approvals, and therefore could not be commercialized on a timely basis or at all. Further, the results of our preclinical studies, clinical trials, or analyses may not be indicative of results that may be obtained in later trials.*
- *The regulatory approval processes of the FDA and comparable foreign regulatory authorities are unpredictable, lengthy, and time-consuming, and if we are ultimately unable to obtain regulatory approval for PIPE-791 or any other drug candidates that we develop or J&J is unable to obtain regulatory approval for PIPE-307, our business will be substantially harmed.*

- *We may not be successful in our efforts to identify and develop additional drug candidates or identify additional indications. Due to our limited resources and access to capital, we must prioritize development of a limited number of drug candidates, the choice of which may prove to be wrong and adversely affect our business.*
- *We have and may continue to conduct future clinical trials outside of the United States. The FDA and other regulatory authorities or ethics committees may not accept data from such trials, in which case our development plans will be delayed, which could materially harm our business and financial condition.*
- *We have incurred significant operating expenses since inception and anticipate that our operating expenses will continue to significantly increase for the foreseeable future. As a result, we may be unable to sustain profitability, and if we are unable to achieve sustained profitability, the market value of our common stock will likely decline. As of December 31, 2023, we had an accumulated deficit of $75.1 million.*
- *We have a limited operating history and the drug candidates we have developed are in the early stages of clinical development, which may make it difficult to evaluate the prospects for our future viability.*
- *Even if this offering is successful, we will require significant additional capital to complete the development and commercialization of PIPE-791 and the other drug candidates we select for development.*
- *If the J&J License Agreement does not result in the successful development of PIPE-307, our business, financial condition and results of operations will be harmed.*
- *We may seek to grow our business through in-licensing transactions or otherwise by acquiring drug candidates or complementary products, technologies or businesses. The failure to properly identify these drug candidates, products, technologies or businesses, as well as the failure to successfully complete transactions or to integrate any such drug candidates, products, technologies or businesses that we do in-license or acquire with our existing business, could harm our business, financial condition and operating results.*
- *If we are unable to obtain, maintain and enforce intellectual property protection for our technology and drug candidates or if the scope of the intellectual property protection we obtain is not sufficiently broad, our competitors could develop and commercialize technology and products similar or identical to ours, and our ability to successfully commercialize and generate revenues from our drug candidates may be adversely affected.*
- *We currently rely on third-party contract manufacturing organizations (CMOs) for the production of clinical supplies of PIPE-791 and PIPE-307 and we intend to rely on CMOs for our future drug candidates, as well as to supply the raw materials necessary to produce our drug candidates. We may elect to continue to rely on CMOs for the production of commercial supplies of PIPE-791, if approved. Our dependence on CMOs may impair our development of drug candidates and may impair their commercialization, which would adversely impact our business and financial position.*
- *We rely on third parties to conduct our ongoing clinical trials of PIPE-791 and PIPE-307 and expect to rely on third parties to conduct future clinical trials of PIPE-791 and any other drug candidates that we develop. If these third parties do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize the drug candidates we develop and our business could be substantially harmed.*

- *Our future success depends on our ability to retain our key personnel and to attract, retain and motivate qualified personnel.*
- *We face significant competition from biotechnology, pharmaceutical, and medical device companies, and our operating results will suffer if we fail to compete effectively and in a timely manner.*
- *Even if PIPE-791 or PIPE-307 receives marketing approval in an indication, it may fail to achieve market acceptance by physicians, patients, third-party payors, or others in the medical community necessary for commercial success.*
- *We have no sales, marketing or distribution capabilities or experience. If we are unable to establish sales and marketing capabilities either on our own or in collaboration with third parties, we may not be successful in commercializing PIPE-791, even if approved.*
- *Our amended and restated certificate of incorporation, which will be in effect at the completion of this offering, will provide that the Court of Chancery of the State of Delaware and the U.S. federal district courts are the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.*

Corporate Information

We were incorporated in the state of Delaware in 2009 as Versense Pharmaceuticals, Inc. (Versense). Versense changed its corporate name to Inception 3, Inc. (Inception), in October 2011, and commenced active operations in July 2012. In May 2018, Inception changed its corporate name to Sirocco Therapeutics, Inc. (legacy Sirocco). A separate entity named Pipeline Therapeutics, Inc. (or legacy Pipeline) was founded and incorporated in the state of Delaware in May 2017. On May 7, 2019, legacy Sirocco acquired legacy Pipeline in a merger transaction. In January 2020, legacy Pipeline was merged into legacy Sirocco and ceased to exist; and legacy Sirocco changed its name to Pipeline Therapeutics, Inc. In November 2023, Pipeline Therapeutics, Inc. changed its name to Contineum Therapeutics, Inc.

Our principal executive offices are located at 10578 Science Center Drive, Suite 200, San Diego, California 92121. Our telephone number is (858) 333-5280. Our website address is www.contineum-tx.com. Information contained on the website is not incorporated by reference into this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Contineum, the Contineum logo and our other registered or common law trademarks appearing in this prospectus are the property of Contineum Therapeutics, Inc. This prospectus contains references to our trademarks, trade names and service marks and to those belonging to other entities. Solely for convenience, trademarks, trade names and service marks referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ®, TM or SM symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks, trade names and service marks. We do not intend our use or display of other entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

Implications of Being an Emerging Growth Company and Smaller Reporting Company

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended (JOBS Act). We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year in which we have more than $1.235 billion in annual gross revenue; (ii) the date we qualify as a "large accelerated filer" as defined in Rule 12b-2 under the Exchange Act of 1934, as amended (Exchange Act), with at least $700 million of equity securities held by non-affiliates; (iii) the issuance, in any three-year period, by us of more than $1.0 billion in non-convertible debt securities; or (iv) the last day of the fiscal year ending after the fifth anniversary of this offering. As a result of this status, we have taken advantage of certain exemptions from various reporting requirements in this prospectus that are applicable to other publicly-traded entities that are not emerging growth companies and may elect to take advantage of other exemptions from reporting requirements in our future filings with the Securities and Exchange Commission (SEC). In particular, in this prospectus, these exemptions include:

- the option to present only two years of audited financial statements and only two years of Management's Discussion and Analysis of Financial Condition and Results of Operations;
- not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act of 2002, as amended (Sarbanes Oxley Act); and
- not being required to disclose certain executive compensation-related items such as the correlation between executive compensation and performance and comparisons of the chief executive officer's compensation to median employee compensation.

In addition, Section 107 of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies. We have elected to avail ourselves of this exemption and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for private companies. As a result, we do not know if some investors will find our common stock less attractive. The result may be a less active trading market for our common stock, and the price of our common stock may become more volatile.

Even after we no longer qualify as an emerging growth company, we may continue to qualify as a "smaller reporting company," which would allow us to take advantage of many of the same exemptions from disclosure requirements including reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements, if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue is less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million.

THE OFFERING

Issuer	Contineum Therapeutics, Inc.
Shares of Class A common stock offered by us	6,875,000 shares
Underwriters' option to purchase additional shares	We have granted the underwriters an option for a period of 30 days from the date of this prospectus to purchase up to 1,031,250 additional shares of our Class A common stock.
Class A common stock to be outstanding immediately after this offering	23,397,452 shares (or 24,428,702 shares if the underwriters exercise their option to purchase additional shares in full)
Class B common stock to be outstanding immediately after this offering	1,733,338 shares
Use of proceeds	We estimate that the net proceeds from this offering will be approximately $99.8 million, or approximately $115.2 million if the underwriters exercise their option to purchase additional shares in full, after deducting underwriting discounts and estimated offering expenses payable by us. We intend to use the net proceeds from this offering (i) to advance the development of our LPA1R antagonist program, including the completion of our Phase 1b PET imaging trial and Phase 2 clinical trials for our lead drug candidate, PIPE-791, in IPF and Progressive MS, (ii) to complete our Phase 2 clinical trials of PIPE-307 for the potential treatment of RRMS, and (iii) the remaining proceeds to fund other research and development activities and for general corporate purposes. See "Use of Proceeds" on page 83 for additional information.
Voting Rights	We have two classes of common stock: Class A common stock and Class B common stock. Class A common stock has one (1) vote per share and Class B common stock has no votes per share. Only the Class A common stock is being offered in this offering. For a description of the rights of the Class A common stock and Class B common stock, see "Description of Capital Stock."

Risk Factors	See "Risk Factors" beginning on page 15 and the other information included in this prospectus for a discussion of factors you should consider carefully before deciding to invest in our common stock.
Nasdaq trading symbol	"CTNM"

The number of shares of our Class A common stock and Class B common stock to be outstanding after this offering is based on 16,522,452 shares of our Class A common stock and 1,733,338 shares of our Class B common stock outstanding as of December 31, 2023, and gives effect to the automatic conversion of 15,906,236 shares of our outstanding convertible preferred stock as of December 31, 2023 into an aggregate of 15,906,236 shares of our common stock, which includes 14,172,898 shares of our Class A common stock and 1,733,338 shares of our Class B common stock immediately prior to the completion of this offering, and excludes:

- 2,674,405 shares of Class A common stock issuable upon the exercise of stock options outstanding as of December 31, 2023, with a weighted-average exercise price of $5.91 per share;
- 242,278 shares of Class A common stock issuable upon the exercise of stock options granted after December 31, 2023 and through March 31, 2024, with a weighted-average exercise price of $16.18 per share;
- 15,764 shares of our Class A common stock issuable upon the exercise of an outstanding warrant to purchase shares of our Series B convertible preferred stock (which will convert into a warrant to purchase 15,764 shares of our Class A common stock in connection with the completion of this offering) at an exercise price of $9.52 per share;
- 502,491 shares of Class A common stock reserved for future issuance under our 2012 Equity Incentive Plan (the 2012 Plan) as of December 31, 2023, which shares will be added to the shares to be reserved under our 2024 Equity Incentive Plan (the 2024 Plan) upon its effectiveness;
- 2,700,000 shares of Class A common stock reserved for future issuance under our 2024 Plan, as well as any future automatic increases in the number of shares of Class A common stock reserved for future issuance under this plan; and
- 280,000 shares of Class A common stock reserved for future issuance under our 2024 Employee Stock Purchase Plan (the 2024 ESPP), as well as any future automatic increases in the number of shares of Class A common stock reserved for future issuance under this plan.

On the date of this prospectus we will cease granting awards under our 2012 Plan. Our 2024 Plan and 2024 ESPP also provide for automatic annual increases in the number of shares reserved thereunder (evergreen provisions), as more fully described in the sections titled "Executive Compensation—Equity Plans—2024 Equity Incentive Plan" and "Executive Compensation—Employee Stock Purchase Plan."

Unless otherwise indicated, all information in this prospectus assumes:

- no exercise by the underwriters of their option to purchase up to an additional 1,031,250 shares of our Class A common stock;
- no exercise of the outstanding stock options and warrant described above after December 31, 2023;

- a 1-for-5.5972 reverse stock split of our capital stock effected on April 1, 2024;
- the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 15,906,236 shares of our common stock, consisting of 14,172,898 shares of Class A common stock and 1,733,338 shares of Class B common stock immediately prior to the completion of this offering; and
- the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws immediately prior to the completion of this offering.

SUMMARY FINANCIAL DATA

The summary statements of operations data for the years ended December 31, 2022 and 2023 are derived from our audited financial statements and related notes included elsewhere in this prospectus. Our historical results are not necessarily indicative of results that may be expected in the future, and the results for the year ended December 31, 2023, are not necessarily indicative of results that may be expected for any other period. You should read these summary financial data together with our financial statements and related notes appearing elsewhere in this prospectus and the information in the sections titled "Management's Discussion and Analysis of Financial Condition and Results of Operations." The summary financial data in this section are not intended to replace our financial statements and the related notes and are qualified in their entirety by our financial statements and related notes included elsewhere in this prospectus.

	Years Ended December 31,	
	2022	2023
	(in thousands, except share and per share data)	
Statement of Operations Data:		
Revenue:		
License revenue	$ —	$ 50,000
Operating expenses:		
Research and development	16,894	27,603
General and administrative	5,826	6,320
Total operating expenses	22,720	33,923
Income (loss from operations)	(22,720)	16,077
Other income (expense):		
Interest income	761	4,606
Interest expense	(388)	(208)
Change in fair value of preferred stock warrant liability	3	5
Change in fair value of investor rights and obligations liability	(1,817)	2,867
Other expense, net	(92)	(177)
Total other income (expense)	(1,533)	7,093
Income (loss) before income taxes	(24,253)	23,170
Provision for income taxes	—	450
Net income (loss)	$ (24,253)	$ 22,720
Net income (loss) attributable to common stockholders, basic[(1)]	$ (24,253)	$ 3,146
Net income (loss) attributable to common stockholders, diluted[(1)]	$ (24,253)	$ 274
Net income (loss) per share, basic[(1)]	$ (10.81)	$ 1.36
Net income (loss) per share, diluted[(1)]	$ (10.81)	$ 0.08
Weighted-average shares of common stock outstanding basic[(1)]	2,243,066	2,308,972
Weighted-average shares of common stock outstanding diluted[(1)]	2,243,066	3,395,514
Pro forma net income per share attributable to common stockholders, basic (unaudited)[(1)]		$ 1.36
Pro forma net income per share attributable to common stockholders, diluted (unaudited)[(1)]		$ 1.12
Weighted-average shares outstanding used in computing pro forma net income per share attributable to common stockholders, basic (unaudited)[(1)]		16,674,148
Weighted-average shares outstanding used in computing pro forma net income per share attributable to common stockholders, diluted (unaudited)[(1)]		17,760,690

(1) For the calculation of our basic and diluted net loss per share attributable to common stockholders, unaudited basic and diluted pro forma net loss per share and weighted-average number of shares used in the computation of the per share amounts, see Note 13 to our audited financial statements included elsewhere in this prospectus.

	As of December 31, 2023		
	Actual	Pro Forma[1]	Pro Forma As Adjusted[2]
		(unaudited) (in thousands)	
Balance Sheet Data			
Cash, cash equivalents and marketable securities	$125,190	125,190	225,375
Working capital[3]	$122,222	122,222	222,407
Total assets	$130,386	130,386	230,196
Convertible preferred stock	$192,620	—	—
Total stockholders' (deficit) equity	$ (67,936)	124,684	224,494

(1) The pro forma balance sheet data gives effect to the automatic conversion of all 15,906,236 outstanding shares of our outstanding convertible preferred stock as of December 31, 2023 into an aggregate of 15,906,236 shares of our common stock, consisting of 14,172,898 shares of Class A common stock and 1,733,338 shares of Class B common stock, which will occur immediately prior to the completion of this offering and the filing and effectiveness of our amended and restated certificate of incorporation, which will occur in connection with the closing of this offering.

(2) Reflects the pro forma adjustments described in footnote (1) above and the issuance and sale of 6,875,000 shares of Class A common stock in this offering at the initial public offering price of $16.00 per share, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

(3) We define working capital as current assets *less* current liabilities. See our audited financial statements and related notes appearing at the end of this prospectus for further details regarding our current assets and current liabilities.

RISK FACTORS

Investing in our common stock is speculative and involves a high degree of risk. Before investing in our common stock, you should consider carefully the risks described below, together with the other information contained in this prospectus, including our financial statements and the related notes appearing at the end of this prospectus. If any of the following risks occur, our business, financial condition, results of operations and future growth prospects could be materially and adversely affected. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment. This prospectus also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of a number of factors, including the risks described below. See "Special Note Regarding Forward-Looking Statements" elsewhere in this prospectus.

Risks Related to Development, Clinical Testing, and Regulatory Approval

We are heavily dependent on the success of PIPE-791, our lead drug candidate, and PIPE-307, both of which are in the early stages of clinical development. If these drug candidates do not progress through clinical development, eventually receive regulatory approval or, even if approved, are not successfully commercialized, our business will be materially adversely harmed.

We currently have no products that are approved for commercial sale and may never be able to develop a marketable product. To date, we have invested a significant portion of our efforts and financial resources on the development of PIPE-791 and PIPE-307. We wholly-own, and are pursuing the clinical development of, PIPE-791 for the treatment of IPF and Progressive MS. In February 2023, we entered into the J&J License Agreement, pursuant to which we granted J&J an exclusive, worldwide license to develop, manufacture and commercialize PIPE-307 in all indications in exchange for an upfront payment and the right to receive future milestone payments and royalties. We are conducting a Phase 2 clinical trial of PIPE-307 for the potential treatment of RRMS, and J&J has announced its intention to initiate a Phase 2 clinical trial of PIPE-307 in depression in 2024. After we complete the Phase 2 clinical for PIPE-307 for the potential treatment of RRMS, J&J has sole discretion to determine whether to pursue further development of PIPE-307 for this indication. Our future success is, therefore, dependent on our ability to successfully complete clinical development for, obtain regulatory approval for, and successfully commercialize PIPE-791 and on J&J's efforts to successfully complete clinical development for, obtain regulatory approval for, and successfully commercialize PIPE-307, which in each case may never occur. We expect that a substantial portion of our efforts and expenditures over the next few years will be devoted to PIPE-791, which will require additional clinical development, management of clinical and manufacturing activities, regulatory approval, establishing commercial scale manufacturing, and significant sales, marketing, and distribution efforts before we can generate any revenues from any commercial sales. We cannot be certain that we or J&J, respectively, will be able to successfully complete any of these activities or that, even if PIPE-791 and/or PIPE-307 receive regulatory approval, such products will be able to successfully compete against therapies and technologies offered by other companies.

The research, testing, manufacturing, labeling, approval, sale, packaging, marketing, and distribution of drug products are subject to extensive regulation by the FDA and comparable regulatory authorities in other countries. We are not permitted to market or sell PIPE-791, and J&J will not be permitted to market or sell PIPE-307, in the United States until we or J&J, as applicable, receive approval of a New Drug Application (NDA) from the FDA for such drug candidate. Further, we are not permitted to market or sell PIPE-791, and J&J will not be permitted to market or sell PIPE-307, in any foreign countries until we or J&J, as applicable, receive the requisite approvals from such countries. Neither we nor J&J have submitted an NDA to the FDA or comparable applications to other regulatory

authorities for PIPE-791 or PIPE-307, respectively, in any indication. Neither party will be in a position to do so for several years, if ever. If we are unable to obtain the necessary regulatory approvals for PIPE-791 in any country, we will not be able to commercialize such drug candidate in that country. Similarly, if J&J is unable to obtain the necessary regulatory approvals for PIPE-307 in any country, it will not be able to commercialize such drug candidate in that country. In both cases, our financial position will be materially adversely affected, and we may not be able to generate sufficient revenue to continue our business.

Clinical drug development is a lengthy, expensive and risky process with uncertain timelines and uncertain outcomes. The results of earlier preclinical studies and clinical trials, including those conducted by third parties, may not be predictive of future results. If clinical trials for the drug candidates we develop do not meet safety or efficacy endpoints or are prolonged or delayed, these drug candidates may not receive the required regulatory approvals, and therefore could not be commercialized on a timely basis or at all. Further, the results of our preclinical studies, clinical trials, or analyses may not be indicative of results that may be obtained in later trials.

Before obtaining marketing approval from regulatory authorities for the sale of the drug candidates we develop, these drug candidates must undergo extensive clinical trials to demonstrate their safety and efficacy in humans. The research and development of drugs is extremely risky. Only a small percentage of drug candidates that enter the development process ever receive marketing approval. Failure or delay can occur at any time during the clinical trial process. To date, we have focused substantially all of our efforts and financial resources on identifying, acquiring, and developing drug candidates, including conducting preclinical studies and early-stage clinical trials. Clinical testing is expensive and can take many years to complete, and we cannot be certain that any clinical trials for the drug candidates we develop will be conducted as planned or completed on schedule, if at all. Our inability to successfully complete preclinical and clinical development for PIPE-791 could result in additional costs to us and negatively impact our ability to generate revenue. Similarly, if J&J cannot successfully complete preclinical and clinical development for PIPE-307, we will not be eligible to receive future milestone payments or royalties under the J&J License Agreement. As a result, our future success is dependent on our ability and the ability of J&J to successfully develop, obtain regulatory approval for, and then successfully commercialize PIPE-791 and PIPE-307, respectively. We currently generate no revenues from sales of any products, and we may never be able to develop or commercialize a marketable product. Further, we may never generate additional milestone payments or royalties under the J&J License Agreement.

PIPE-791 and PIPE-307 are currently in the early stages of clinical development. We completed a Phase 1 clinical trial of PIPE-791 in healthy volunteers in support of clinical development in both IPF and Progressive MS. We plan to submit a CTA to the MHRA to commence a Phase 1b open-label trial of PIPE-791 to measure the relationship of PK to lung and brain receptor occupancy by PET imaging in 2024. This Phase 1b trial will inform dose selection for our planned future Phase 2 trials of PIPE-791 in IPF and Progressive MS. We have completed two Phase 1 trials of PIPE-307 in healthy volunteers and have initiated a Phase 2 trial of PIPE-307 for the potential treatment of RRMS. J&J has announced its intention to initiate a Phase 2 trial for PIPE-307 for the treatment of depression in 2024. The results from our preclinical studies and the early clinical trials for these drug candidates may not be predictive of the results of the current clinical trials being conducted and any later-stage clinical trials conducted for these drug candidates. In addition, results of third-party studies, as well as our evaluations of third-party compounds, may not be predictive of results for our drug candidates. Drug candidates in clinical trials, including PIPE-791 and PIPE-307, may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and early-stage clinical trials. A number of companies in the pharmaceutical industry have suffered significant setbacks in advancing through the clinical trial process due to lack of efficacy or adverse safety profiles, notwithstanding earlier promising results. In addition, conclusions based on promising data from analyses of clinical results may be shown to be

incorrect in subsequent clinical trials that have pre-specified end points or may not be considered adequate by regulatory authorities. Even if the current clinical trials for PIPE-791 and PIPE-307 are completed as planned, we cannot be certain that their results will support the safety and efficacy requirements sufficient to pursue later clinical trials and eventually obtain regulatory approval, and, as a result, we may never generate commercial revenues from these drug candidates.

Clinical trial failure may result from a multitude of factors including flaws in trial design, dose selection, placebo effect, patient enrollment criteria, relatively smaller sample size in earlier clinical trials, and failure to demonstrate favorable safety or efficacy traits. As such, failure in clinical trials can occur at any stage of testing. A number of companies in the biopharmaceutical industry have suffered setbacks in the advancement of clinical trials due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier trials, and we cannot be certain that we will not face similar setbacks. Based upon negative or inconclusive results, we may decide, or regulators may require us, to conduct additional clinical trials or preclinical studies. In addition, data obtained from clinical trials are susceptible to varying interpretations, and regulators may not interpret the data from these trials as favorably as we do, which may further delay, limit or prevent marketing approval. Furthermore, as more drug candidates within a particular class of drugs proceed through clinical development to regulatory review and approval, the amount and type of clinical data that may be required by regulatory authorities may increase or change. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and preliminary or interim results of a clinical trial do not necessarily predict final results. For example, PIPE-791 and/or PIPE-307 may fail to show the desired safety and efficacy in clinical development despite positive results in preclinical studies, or having successfully advanced through early-stage clinical trials. The failure of any of drug candidate to demonstrate safety and efficacy in any clinical trial or for any indication could negatively impact the perception of the use of this drug candidate to treat other indications and the perception of any other drug candidate we develop (and therefore hinder the ability to successfully move forward with the development of the drug candidate in other indications or the development of our other drug candidates) or cause regulatory authorities to require additional testing before approving any of the drug candidates we develop.

Our lead drug candidate, PIPE-791, and our partnered drug candidate, PIPE-307, are each in the early-stages of clinical development for each indication, and as a result, their risk of failure is high. We are unable to predict if PIPE-791 or PIPE-307 will prove safe or effective in humans for any indication or that any of our future drug candidates that advance into clinical trials will prove safe or effective in humans or will obtain marketing approval. If we or J&J are unable to complete current and future planned clinical trials for PIPE-791 and PIPE-307, respectively, due to safety concerns, or if the results of these trials are not satisfactory to convince regulatory authorities of their safety or efficacy, we and/or J&J will not be able to obtain marketing approval for commercialization. Even if we and/or J&J are able to obtain marketing approvals for PIPE-791 and PIPE-307, respectively, those approvals may be for indications that are not as broad as desired or may contain other limitations that would adversely affect our ability to generate revenue from sales of PIPE-791 or to generate royalties or achieve milestones from PIPE-307. Moreover, if we or J&J are not able to differentiate PIPE-791 and PIPE-307, respectively, against other approved products for the indications being targeted for PIPE-791 and PIPE-307, or if any of the other circumstances described above occur, our business would be materially harmed and our ability to generate revenue from these drug candidates would be severely impaired.

We may experience delays in initiating and completing any clinical trials that we intend to conduct, including our current clinical trials for PIPE-791 and PIPE-307, and we do not know whether our clinical trials will begin on time, need to be redesigned, enroll sufficient numbers of patients on time, or be completed on schedule, or at all. J&J will face similar concerns for any future clinical trials it conducts for PIPE-307. A clinical trial 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 the clinical trial;
- obtaining regulatory approval to commence the clinical trial;
- reaching an agreement on acceptable terms with prospective 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 IRB approval at each site within the United States or independent ethics committee (IEC) or other approval at sites outside the United States;
- recruiting suitable patients to participate in the clinical trial in a timely manner and in sufficient numbers;
- having patients complete the clinical trial or return for post-treatment follow-up;
- imposition of a clinical hold by regulatory authorities, including as a result of unforeseen safety issues or side effects or failure of clinical trial sites or investigators to adhere to regulatory requirements or follow trial protocols;
- clinical sites or investigators deviating from the clinical trial protocol or dropping out of the clinical trial, potentially necessitating the addition of new sites or investigators;
- third-party contractors failing to comply with regulatory requirements or meet their contractual obligations in a timely manner, or at all, or deviating from the clinical trial protocol;
- addressing patient safety concerns that arise during the clinical trial, including a decision by the initiating party, regulatory authorities, or IRBs, IECs or other relevant entities to suspend or terminate the clinical trial;
- adding a sufficient number of clinical trial sites;
- increased or unforeseeable costs in conducting a clinical trial;
- timely manufacturing sufficient quantities of a drug candidate, and accessing sufficient quantities of other materials (e.g. placebo, equipment) for use in the clinical trial; and
- potential disruptions caused by public health emergencies (PHEs) such as COVID-19, including difficulties in initiating clinical sites, enrolling and retaining participants, diversion of healthcare resources away from clinical trials, travel or quarantine policies that may be implemented, and other factors.

A clinical trial may also be suspended or terminated by the initiating party, the IRBs or IECs of the institutions in which such clinical trial is being conducted, the FDA or other regulatory authorities, or recommended for termination by a Data and Safety Monitoring Board (DSMB) for such trial. Such authorities may impose a suspension or termination or recommend an alteration due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements, such as Good Clinical Practice (GCP) requirements, or the clinical trial protocols, inspection of the clinical trial operations or clinical 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. Further, J&J has the right to discontinue the clinical trial we are currently conducting for PIPE-307 if it has good faith concerns that such study presents safety risks or could present material adverse effects for the development or commercialization of PIPE-307 generally.

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 the section titled "—Risks related to our dependence on third parties."

If the commencement or completion of any clinical trials for PIPE-791 or PIPE-307 is delayed, or if a clinical trial is terminated prior to completion, the commercial prospects of the applicable drug candidate could be harmed, and our ability to generate revenues or royalties from such drug candidate may be delayed. In addition, any delays in our clinical trials could increase our costs, slow the development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences could materially harm our business, financial condition and results of operations. In addition, many of the factors that may cause, or lead to, a delay in the commencement or completion of a clinical trial may also ultimately lead to the denial of regulatory approval of the applicable drug candidate.

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

The regulatory approval processes of the FDA and comparable foreign regulatory authorities are unpredictable, lengthy, and time-consuming, and if we are ultimately unable to obtain regulatory approval for PIPE-791 or any other drug candidates that we develop or J&J is unable to obtain regulatory approval for PIPE-307, our business will be substantially harmed.

The time required to obtain approval by the FDA and comparable foreign regulatory authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the indication being studied and the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval for an indication may change during a drug candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for PIPE-791, and J&J has not obtained regulatory approval for PIPE-307. It is possible that neither of these drug candidates or future drug candidates will receive the regulatory approvals required for commercialization. We are not permitted to market PIPE-791 or any other drug candidates that we develop in the United States until we receive approval of an NDA from the FDA. Similarly, J&J will not be permitted to market PIPE-307 in the United States until it receives approval of an NDA from the FDA.

Prior to obtaining approval to commercialize a drug candidate in the United States or abroad, the initiating party must demonstrate with substantial evidence from well-controlled clinical trials, and to the satisfaction of the FDA or comparable foreign regulatory authority, that such drug candidate is safe and effective for its intended indication. In addition, data obtained from preclinical trials and clinical trials are susceptible to varying interpretations, and regulatory authorities may not interpret this data as favorably as the initiating party, which may further delay, limit, or prevent development efforts, clinical trials, or marketing approval. For example, even if we believe the preclinical or clinical data for PIPE-791 in an indication is promising, such data may not be sufficient to support approval by the FDA and other comparable regulatory authorities for this indication. Furthermore, as more competing drug candidates within a class of drugs proceed through clinical development to regulatory review and approval, the

amount and type of clinical data that may be required by regulatory authorities may increase or change.

The FDA or any foreign regulatory authority can delay, limit, or deny approval of PIPE-791, PIPE-307 or any other drug candidates that we develop for any indication, or require us or J&J, as applicable, 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 design or implementation of a clinical trial;
- the initiating party may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a drug candidate is safe and effective for its proposed indication;
- serious and unexpected drug-related side effects experienced by participants in a clinical trial or by individuals using drugs similar to the drug candidate being studied in the clinical trial, or other products containing an active ingredient in such drug candidate;
- negative or ambiguous results from a clinical trial or results that may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- the inability to demonstrate that a drug candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with the interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials 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 the initiating party may be required to conduct additional clinical trials;
- the FDA's or the applicable foreign regulatory authority's disagreement regarding the formulation, the labeling, and/or the specifications of a drug candidate;
- the FDA or comparable foreign regulatory authorities may fail to approve or find deficiencies with the manufacturing processes or facilities of third-party manufacturers that produced the drug candidate for use in the clinical trials; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering the clinical data insufficient for approval.

Of the large number of drugs in development, only a small percentage successfully complete the regulatory approval processes and are commercialized. The lengthy approval process, as well as the unpredictability of future clinical trial results, may result in the failure of PIPE-791 and/or PIPE-307 to obtain the required regulatory approvals for commercialization in any indication, which would significantly harm our business, results of operations and prospects.

In addition, the FDA or the applicable foreign regulatory authority also may approve a drug candidate for a more limited indication or patient population than originally requested, and the FDA or applicable foreign regulatory authority may approve a drug candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that drug candidate. Any of the foregoing circumstances could materially harm the commercial prospects for the drug candidates we develop and our business.

We may not be successful in our efforts to identify and develop additional drug candidates or identify additional indications. Due to our limited resources and access to capital, we must prioritize development of a limited number of drug candidates, the choice of which may prove to be wrong and adversely affect our business.

We intend to explore the development of PIPE-791 in indications in addition to IPF and Progressive MS. We recently designated CTX-343, a peripherally restricted LPA1R antagonist, as a drug candidate. We also intend to continue to explore additional drug candidates based on our clinical translational approach and drug development efforts. In each case, we may fail to successfully identify additional indications for PIPE-791, develop CTX-343, or identify viable new drug candidates for clinical development. If we fail to identify additional indications for PIPE-791 or additional potential drug candidates, our business and growth plans could be materially harmed.

Research programs to develop additional indications for our existing drug candidates and to develop additional drug candidates based on our clinical translational approach requires substantial technical, financial, and human resources whether or not they are ultimately successful. Our research programs may initially show promise in identifying potential indications or drug candidates, yet fail to yield results for clinical development for several reasons, including:

- the research and development approach we use may not be successful in identifying potential indications or drug candidates;
- potential drug candidates may, after further study, be shown to have harmful or unexpected adverse effects or other characteristics that indicate they are unlikely to be effective drugs; or
- it may take greater human and financial resources than we possess to identify additional therapeutic opportunities for our drug candidates or to develop suitable potential drug candidates through internal research programs, thereby limiting our ability to develop, diversify, and expand our product portfolio.

Because we have limited financial and human resources, we intend to initially focus on research programs and drug candidates for a limited set of indications. As a result, we may forego or delay pursuit of opportunities with other drug candidates or for other indications that could have greater commercial potential or a greater likelihood of success. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities.

Accordingly, there can be no assurance that we will ever be able to identify additional therapeutic opportunities for our drug candidates or to develop suitable potential drug candidates through our internal research and development programs, which could materially adversely affect our future growth and prospects. We may focus our efforts and resources on potential drug candidates or other potential programs that ultimately prove to be unsuccessful.

We have and may continue to conduct future clinical trials outside of the United States. The FDA and other regulatory authorities or ethics committees may not accept data from such trials, in which case our development plans will be delayed, which could materially harm our business and financial condition.

We have previously conducted clinical trials outside of the United States, including our Phase 1 clinical trial of PIPE-307, which was conducted under authorization of the Australian Therapeutic Goods Administration (TGA) and the National Health and Medical Research Council (NHMRC) and a Phase 1b PET study of PIPE-307, which was conducted under the authorization of the Research Ethics Committee (REC) and the MHRA in the United Kingdom. We completed our Phase 1b PET clinical trial for PIPE-307 in RRMS in the United Kingdom, and we intend to conduct our Phase 1b PET clinical trials for PIPE-791 in IPF and Progressive MS in the United Kingdom. We may also conduct

additional clinical trials outside the United States in the future. Although the FDA and other foreign regulatory authorities may accept data from clinical trials conducted outside the United States, acceptance of this data is subject to certain conditions imposed by these regulators. For example, non-clinical toxicology studies for our Phase 1b PET study of PIPE-307 were performed in China that were not Good Laboratory Practice (GLP) compliant and, as China is not a signatory on the Organization for Economic Co-operation and Development (OECD), Mutual Acceptance of Data system, a multilateral agreement that allows participating countries to share the results of various non-clinical tests performed using OECD methods and principles, the non-clinical data were not considered acceptable to support the trial. While the Phase 1b was approved on the basis of clinical safety data, the MHRA stated that prior to Marketing Authorization Approval of PIPE-307 in the United Kingdom, an inspection or further evaluation could be triggered. Further, in cases where data from foreign clinical trials are intended to serve as the basis for marketing approval in the United States, the FDA will generally not approve the application on the basis of foreign data alone unless (i) the data are applicable to the U.S. population and U.S. medical practice; and (ii) the trials were performed by clinical investigators of recognized competence and pursuant to GCP regulations. In general, the patient population for any clinical trials conducted outside the United States must be representative of the population for whom we intend to label the drug candidate in the United States. Additionally, the FDA's clinical trial requirements, including sufficient size of patient populations and statistical powering, must be met. Many foreign regulatory authorities have similar approval requirements for clinical trials. In addition, such trials would be subject to the applicable local laws of the foreign jurisdictions where the trials are conducted. Further, the FDA must be able to validate the data from the clinical trial through an onsite inspection if it deems such inspection necessary. In addition, when clinical trials are conducted only at sites outside of the United States, such trials may not be subject to IND review, meaning the FDA may not provide advance comment on the clinical protocols for the trials, and therefore there is an additional potential risk that the FDA could determine that the trial design or protocol for a non-U.S. clinical trial was inadequate, which would likely require an additional clinical trial in order to obtain FDA approval. If the FDA does not accept data from any clinical trials we conduct outside the United States, it would likely result in the need for additional clinical trials, which would be costly and time consuming and delay our drug development plans, which could materially harm our business, financial condition, results of operations and prospects.

Conducting clinical trials outside the United States also exposes us to additional risks, including risks associated with:

- additional foreign regulatory requirements;
- foreign exchange fluctuations;
- patient monitoring and compliance;
- compliance with foreign manufacturing, customs, shipment and storage requirements (including licensing requirements);
- cultural differences in medical practice and clinical research;
- diminished protection of intellectual property in some countries; and
- tax and local corporate structure considerations.

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 the ability to enroll a sufficient number of patients who remain in the trial 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. J&J may encounter similar difficulties in enrolling and retaining patients in any clinical trials it initiates for PIPE-307. 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 clinical trial's primary endpoints;
- the nature of the clinical trial protocol;
- the existing body of safety and efficacy data with respect to the drug candidate;
- the proximity of patients to clinical sites;
- the ability to recruit clinical trial investigators with the appropriate competencies, motivation and experience;
- clinicians' and patients' perceptions as to the potential risks and advantages of the drug candidate being studied in relation to other available therapies, including any new drugs or medical devices that may be approved for the indications being studied;
- the availability of approved products that treat the same indications as the drug candidate being studied;
- the proximity and availability of clinical trial sites for prospective patients;
- the ability to monitor patients adequately during and after treatment;
- competing clinical trials being conducted by other companies or institutions;
- the ability to obtain and maintain patient consents;
- the risk that patients enrolled in clinical trials will drop out of the trials before completion; and
- factors we may not be able to control that may limit patients, principal investigators or staff or clinical site availability, such as uncertain geopolitical conditions or pandemics, such as the recent COVID-19 pandemic.

In addition, any clinical trials we conduct for PIPE-791 or J&J conducts for PIPE-307 will compete with other clinical trials for drug candidates and medical devices that are in the same therapeutic areas as these drug candidates, and this competition could reduce the number and types of patients available to us or J&J, because some patients who might have opted to enroll in any PIPE-791 or PIPE-307 clinical trials may instead opt to enroll in a clinical trial being conducted by a competitor. Furthermore, any negative results we or J&J report in the clinical trials for PIPE-791 and PIPE-307 may make it difficult or impossible to recruit and retain patients in other clinical trials of that same drug candidate. Delays or failures in planned patient enrollment or retention may result in increased costs or program delays, which could have a harmful effect on the continued development of a drug candidate or could render further commercial development impossible.

Interim and preliminary "top-line" data from our clinical trials that we announce or publish from time to time may change as more patient data becomes available and is subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publicly disclose interim, top-line or preliminary data from the clinical trials we conduct, which is based on a preliminary analysis of then-available data. The final results from these clinical trials and any related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular 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. In addition, interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data becomes available. As a result, the top-line or preliminary results that we report may differ from future results of the same trial, or different conclusions or considerations may qualify such results, once additional data has been received and fully evaluated. Top-line or preliminary data also remains subject to audit and verification procedures that may result in the final data being materially different from the top-line or preliminary data we previously published. As a result, top-line and preliminary data should be viewed with caution until final data is available and published. Adverse differences between interim data and final data could significantly harm our business prospects. Further, disclosure of interim data by us or by our competitors could result in volatility in the price of our Class A common stock.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular drug candidate or product and our company in general. In addition, the information we choose to publicly disclose regarding a particular clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is material or otherwise appropriate information to include in our disclosure.

If the interim, top-line or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, the drug candidates we develop may be harmed, which could harm our business, financial condition, results of operations and prospects.

The administration of PIPE-791 and/or PIPE-307 may cause serious adverse events or undesirable side effects, which may halt their clinical development, delay or prevent marketing approval, or, if approved, require them to be taken off the market, include safety warnings, or otherwise limit their sales.

Serious adverse events or undesirable side effects caused by PIPE-791 or PIPE-307 could cause us or J&J, as applicable, or regulatory authorities to interrupt, delay, or halt the 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 regulatory authorities for these drug candidates. Results of any clinical trial for PIPE-791 or PIPE-307 could reveal a high and unacceptable severity and prevalence of side effects. If unacceptable side effects arise in the development of any drug candidate, we or J&J, as applicable, the FDA, or the IRBs or IECs at the institutions in which a study is being conducted, or the DSMB, if constituted for a clinical trial, could recommend a suspension or termination of the clinical trial, or the FDA or comparable foreign regulatory authorities could prohibit the further development of or deny approval of a drug 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 clinical 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 or J&J, as applicable, may need to train medical personnel regarding the proper administration protocols for PIPE-791 and PIPE-307 and to understand the potential side effect profiles for these drug candidates. Inadequate training in recognizing or managing the potential side effects of PIPE-791 or PIPE-307 could result in patient injury or death. Any of these occurrences may harm our business, financial condition, results of operations and prospects significantly.

Additionally, if PIPE-791, PIPE-307 or any other drug candidate we develop receives marketing approval, and the use of the approved product causes undesirable side effects, 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, or take other market action in relation to such product;
- regulatory authorities may require a product recall, or we or J&J, as applicable, may decide to initiate a voluntary recall of the product;
- regulatory authorities may require additional warnings on the product's label, such as a "black box" warning or contraindications;
- additional restrictions may be imposed on the marketing of the product or the manufacturing processes for the product or any component thereof;
- we or J&J, as applicable, may be required to implement a Risk Evaluation and Mitigation Strategy (REMS) or create a medication guide outlining the risks of such side effects for distribution to patients;
- we or J&J, as applicable, may be required to conduct post-market studies or agree to post marketing commitments;
- we or J&J, as applicable, 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 or J&J, as applicable, from achieving or maintaining market acceptance of PIPE-791 or PIPE-307, if approved, and could significantly harm our business, financial condition, results of operations and prospects.

Changes in funding for the FDA and other government agencies could hinder their ability to hire and retain key leadership and other personnel, or otherwise prevent new products and services from being developed or commercialized in a timely manner, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

The market opportunities for the drug candidates we develop, if approved, may be smaller than we anticipate and, as a result, our commercial opportunities may be limited.

We are initially developing PIPE-791 for the treatment of IPF and Progressive MS. We are also developing PIPE-307, in collaboration with J&J. Our projections of the number of eligible patients for

each of these indications are based on our beliefs and estimates. These estimates have been derived from a variety of sources, including scientific literature, patient foundations, and market research, and may prove to be incorrect. Further, new sources may reveal a change in the estimated number of eligible patients, and the number of patients may turn out to be lower than expected. Additionally, the potentially addressable patient populations for these programs or our future drug candidates may be limited. For example, even if we obtain FDA approval for PIPE-791 for the treatment of IPF or Progressive MS, the target population approved by the FDA may be more limited than what we currently anticipate. Even if we obtain significant market share for any drug candidate, if approved, if the potential target populations are smaller, we may never achieve profitability without obtaining marketing approval for additional indications.

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

We have never obtained marketing approval for any drug candidate. It is possible that the FDA or other foreign regulatory authority may refuse to accept for substantive review any NDAs or similar submission that we submit for PIPE-791 or that J&J may submit for PIPE-307. The FDA may also conclude after review of the data that we or J&J submit that our applications are insufficient to obtain marketing approval for PIPE-791 or PIPE-307, respectively. If the FDA, or other foreign regulatory authority does not accept or approve any NDAs submitted for PIPE-791 or PIPE-307, it may require that we or J&J conduct additional clinical, preclinical, manufacturing validation or other studies and submit that data before it will reconsider the application. Depending on the extent of these or any other required studies, approval of any NDA or similar submission for PIPE-791 or PIPE-307 may be delayed or, in the case of PIPE-791, 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 or other foreign regulatory authority to approve any NDAs or similar submission submitted for PIPE-791 or PIPE-307. Any delay in obtaining, or an inability to obtain, marketing approvals would prevent us from commercializing PIPE-791 and J&J from commercializing PIPE-307, and prevent us from generating revenues from these drug candidates to support our continued operations and plans. If any of these outcomes occur, our business, financial condition and results of operations would be significantly harmed.

Even if we obtain FDA approval for a drug candidate in the United States, we may never obtain approval for the drug candidate in any other jurisdiction or commercialize the drug candidate in the United States or in any other jurisdiction, which would limit our ability to realize its full market potential.

In order to market any product in a particular jurisdiction, we must establish and comply with numerous and varying regulatory requirements regarding safety and efficacy on a country-by-country basis. Approval by the FDA in the United States does not ensure approval by comparable regulatory authorities in other countries or jurisdictions nor does it ensure that we will be able to successfully commercialize such approved drug candidate in the United States or in other 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. Further, successful commercialization in the United States does not guarantee successful commercialization in other jurisdictions.

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 drug 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 we will be unable to realize the full market potential of any product we develop.

Even if we obtain regulatory approval for any drug candidate, we will still face extensive and ongoing regulatory requirements and obligations, which may result in significant additional expense, and any drug candidates, if approved, may face future development and regulatory difficulties.

Any drug candidate for which we obtain marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, packaging, distribution, adverse event reporting, monitoring, storage, recordkeeping, export, import, and 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 (cGMP) and GCP requirements for any clinical trials conducted post-approval, 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 GCP and requirements for any clinical trials that we conduct post-approval.

Even if marketing approval of a drug candidate is granted, the approval may be subject to limitations on the indicated uses for which the drug candidate may be marketed or to the conditions of approval, including a requirement to implement a REMS. If a drug candidate receives marketing approval, the accompanying label may limit the approved indicated use of the product, which could limit sales of the product. The FDA, or comparable foreign regulators, may also require 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 (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;
- refusal to approve pending applications or supplements to approved applications that we submit;

- recalls or market withdrawals 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, consent decrees, or the imposition of civil or criminal penalties.

Further, the policies from the FDA or other comparable regulatory authorities may change, and additional government regulations may be enacted that could prevent, limit, or delay regulatory approval of a drug candidate. 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. The policies of the FDA and of other comparable regulatory authorities may change and additional government regulations may be enacted that could prevent, limit, or delay regulatory approval of a drug candidate. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained, and we may not achieve or sustain profitability, which would adversely affect our business, prospects, financial condition, and results of operations. Furthermore, noncompliance by us or any collaborator with regulatory requirements, including safety monitoring or pharmacovigilance, may also result in significant financial penalties, which would adversely affect our business.

We may seek a breakthrough therapy and/or orphan drug designation for PIPE-791 or future drug candidates, but we might not receive such designations, and even if we do, we may not maintain such designations, and such designations may not lead to faster development, regulatory review or approval, and will not increase the likelihood that the drug candidate will receive marketing approval.

We may seek a breakthrough therapy and/or orphan drug designation for PIPE-791, or other drug candidates we may develop. A breakthrough therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. 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 priority review if supported by clinical data at the time the NDA is submitted to the FDA. We may also seek fast track designation for some of our drug candidates. If a drug is intended for the treatment of a serious or life-threatening condition and preclinical or clinical data demonstrates the potential to address an unmet medical need, the drug sponsor may apply for fast track designation.

Regulatory authorities in some jurisdictions, including the United States, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act of 1983, the FDA may designate a drug as an orphan drug if it is a drug intended to treat a rare disease or condition, which is

generally defined as a patient population of fewer than 200,000 individuals in the United States, or a patient population of greater than 200,000 individuals in the United States but for which there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States alone. In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user fee waivers. After the FDA grants orphan drug designation, the generic identity of the drug and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation, however, neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process. Generally, if a drug with an orphan drug designation subsequently receives the first marketing approval for the targeted indication, then the drug is entitled to a seven-year period of marketing exclusivity that precludes the applicable regulatory authority from approving another marketing application for the same drug for the same indication for the exclusivity period except in limited situations, such as a showing of clinical superiority to the product with orphan drug exclusivity or where the manufacturer is unable to assure sufficient product quantity. For purposes of small molecule drugs, the FDA defines “same drug” as a drug that contains the same active moiety and is intended for the same use as the drug in question. A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan drug designation.

The FDA has broad discretion whether or not to grant breakthrough therapy, fast track and/or orphan drug designation to any drug candidate. Accordingly, even if we believe that a drug candidate meets the criteria for designation as a breakthrough therapy or orphan drug, the FDA may disagree and instead determine not to make such a designation. Even if we receive breakthrough therapy and/or orphan drug designation, the receipt of such designation 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 a drug candidate qualifies as a breakthrough therapy or orphan drug, the FDA may later decide that it no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened. Even if we were to obtain orphan drug designation for a drug candidate, we may not obtain orphan exclusivity and that exclusivity may not effectively protect the drug from the competition of different drugs for the same condition, which could be approved during the exclusivity period. Additionally, after an orphan drug is approved, the FDA could subsequently approve another application for the same drug for the same indication if the FDA concludes that the later drug is shown to be safer, more effective or makes a major contribution to patient care. Orphan drug exclusive marketing rights in the United States also may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the drug to meet the needs of patients with the rare disease or condition. The failure to obtain a breakthrough therapy, fast track and/or orphan drug designation or admission for any drug candidates we may develop, the inability to maintain that designation for the duration of the applicable period, or the inability to obtain or maintain orphan drug exclusivity could reduce our ability to make sufficient sales of the applicable drug candidate to balance our expenses incurred to develop it, which would have a negative impact on our operational results and financial condition. The FDA may withdraw fast track designation if it believes that the designation is no longer supported by data from our clinical development program. Fast track designation alone does not guarantee qualification for the FDA’s priority review procedures.

We may seek approval of our drug candidates, where applicable, under the FDA's accelerated approval pathway. This pathway, even if granted for PIPE-791 or any other future drug candidates, may not lead to a faster development, regulatory review or approval process or launch and it does not increase the likelihood that our drug candidates will receive marketing approval in the United States.

We may seek accelerated approval of PIPE-791 and for future drug candidates from the FDA. A product may be eligible for accelerated approval if it treats a serious or life-threatening condition and generally provides a meaningful advantage over available therapies. In addition, it must demonstrate an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, or IMM, that is reasonably likely to predict an effect on IMM or other clinical benefit. If granted, accelerated approval is usually contingent on the sponsor's agreement to conduct, in a diligent manner, additional post-approval confirmatory studies to verify and describe the drug's clinical benefit. Under the Food and Drug Omnibus Reform Act of 2022 (FDORA), the FDA is permitted to require, as appropriate, that a post-approval confirmatory study or studies be underway prior to approval or within a specified time period after the date of approval for a product granted accelerated approval. FDORA also requires sponsors to send updates to the FDA every 180 days on the status of such studies, including progress toward enrollment targets, and the FDA must promptly post this information publicly. FDORA also gives the FDA increased authority to withdraw approval of a drug or biologic granted accelerated approval on an expedited basis if the sponsor fails to conduct such studies in a timely manner, send the necessary updates to the FDA, or if such post-approval studies fail to verify the drug's predicted clinical benefit. Under FDORA, the FDA is empowered to take action, such as issuing fines, against companies that fail to conduct with due diligence any post-approval confirmatory study or submit timely reports to the agency on their progress. In addition, the FDA currently requires, unless otherwise informed by the agency, pre-approval of promotional materials for products receiving accelerated approval, which could adversely impact the timing of the commercial launch of the product. Thus, even if we do seek to utilize the accelerated approval pathway, we may not be able to obtain accelerated approval and, even if we do, we may not experience a faster development, regulatory review or approval process for that product. In addition, receiving accelerated approval does not assure that the product's accelerated approval will eventually be converted to a traditional approval.

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 any drug candidate in our 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 a drug candidate;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;

- decreased market demand for any product; and
- loss of revenue.

The product liability insurance we currently carry, and any additional product liability insurance coverage we acquire in the future, may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive and, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. If we obtain marketing approval for any drug candidate, we intend to acquire insurance coverage to include the sale of commercial products; however, we may be unable to obtain product liability insurance on commercially reasonable terms or in adequate amounts. 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 our business, financial condition and results of operation, including preventing or limiting the commercialization of any drug candidates we develop.

Risks Related to our Financial Position and Need for Additional Capital

We have incurred significant operating expenses since inception and anticipate that our operating expenses will continue to significantly increase for the foreseeable future. As a result, we may be unable to sustain profitability, and if we are unable to achieve sustained profitability, the market value of our common stock will likely decline. As of December 31, 2023, we had an accumulated deficit of $75.1 million.

We are a clinical-stage biotechnology company with a limited operating history. To date, we have devoted our efforts to research and development, building our operations, establishing and maintaining our intellectual property portfolio, raising capital, identifying drug candidates for commercialization, conducting preclinical studies and clinical trials and negotiating and entering into the J&J License Agreement. As a result, we have incurred significant operating expenses since our formation. We had a net loss of $24.3 million for the year ended December 31, 2022. We had net income of $22.7 million for the year ended December 31, 2023. As of December 31, 2023, we had an accumulated deficit of $75.1 million.

Investment in pharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential drug candidate will fail to advance through clinical development and eventually gain regulatory approval and become commercially viable. We expect to incur significant additional operating losses for the next several years as we continue to develop PIPE-791 in multiple indications, complete the Phase 2 clinical trial for PIPE-307 in RRMS, and endeavor to advance the development of other drug candidate we identify through our preclinical development efforts, complete preclinical studies and clinical trials, seek regulatory approval and prepare to commercialize any approved product. The costs of advancing drug candidates into each clinical phase tend to increase substantially over the duration of the clinical development process. Therefore, the total costs to advance any drug candidate to marketing approval in even a single jurisdiction are substantial.

We expect our operating expenses to increase substantially for the foreseeable future as we:

- complete our current and planned future clinical trials for PIPE-791 in IPF and Progressive MS;
- complete our current clinical trial for PIPE-307 in RRMS;
- expand our product development programs, and develop other drug candidates;
- seek regulatory approvals for PIPE-791, and any other drug candidates we develop;
- secure a commercial manufacturing source and supply chain capacity sufficient to produce commercial quantities of any drug candidate for which we obtain regulatory approval;

- establish a sales, marketing and distribution infrastructure to commercialize any drug candidates for which we may obtain marketing approval;
- maintain, expand, and protect our intellectual property portfolio;
- hire additional clinical, scientific, commercial, operational, financial and management personnel, including personnel to support operations as a public company; and
- acquire or in-license other drug candidates or technologies.

Furthermore, our ability to successfully develop, obtain regulatory approval for and commercialize any drug candidate and generate product revenue is subject to substantial additional risks and uncertainties, as described under "—Risks related to development, clinical testing, and regulatory approval" and "—Risks related to commercialization." As a result, we expect to continue to incur significant operating expenses and negative cash flows for the foreseeable future. These operating expenses 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 operating expenses, and any resulting net losses, will depend, in part, on the rate of future growth of our operating expenses and our ability to generate revenues. If we are unable to develop and commercialize one or more drug candidates or if revenues from any product that receives marketing approval or any milestone payments or royalties we receive under the J&J License Agreement are insufficient, we will not be able to maintain profitability. Even if we successfully commercialize one or more of our drug candidates or J&J successfully commercializes PIPE-307, we may continue to incur substantial research and development and other expenses to identify and develop additional drug candidates. We may not be able to achieve sustained profitability or meet outside expectations for our profitability. If we are unable to achieve sustained profitability or to meet outside expectations for our profitability, we will not be able to implement our business plans and the value of our common stock will be materially adversely affected and you may suffer substantial losses in your investment.

We have a limited operating history and the drug candidates we have developed are in the early stages of clinical development, which may make it difficult to evaluate the prospects for our future viability.

We began operations in 2012. Our operations to date have been limited to research and development, building our operations, establishing and maintaining our intellectual property portfolio, raising capital, identifying drug candidates for commercialization, conducting preclinical studies and clinical trials and negotiating and entering into the J&J License Agreement. PIPE-791 and PIPE-307 are in the early stages of clinical development. We have not obtained marketing approval for any drug candidate, and we have not demonstrated the ability to successfully manufacture a commercial-scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Consequently, predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history or 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 challenges. We will eventually need to transition from a company with a preclinical and early clinical stage focus to a company capable of supporting later stage clinical trials, regulatory approvals and manufacturing and 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, the results of any quarterly or annual period are not necessarily indicative of future operating performance.

Even if this offering is successful, we will require significant additional capital to complete the development and commercialization of PIPE-791 and the other drug candidates we select for development.

We expect to spend substantial funds to complete the development of, seek regulatory approvals for and, if approved, commercialize PIPE-791 in IPF and Progressive MS. We will also incur costs to complete our Phase 2 clinical trial for PIPE-307 in RRMS and, could potentially incur significant costs related to PIPE-307 to the extent we have the opportunity and decide to opt-in to fund a portion of all Phase 3 development costs for PIPE-307. We also expect to spend substantial funds to identify and develop new drug candidates based on our clinical translational approach and development efforts. Based on these plans, even with the net proceeds from this offering, we will require significant additional capital to complete these development activities and implement our commercialization and business plans, which we may acquire through additional equity offerings, debt financings, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements or other sources. Adequate additional financing may not be available to us on acceptable terms, or at all. If events or circumstances occur such that we do not obtain additional funding, we may need to delay, reduce or eliminate our product development or future commercialization efforts, which could have a material adverse effect on our business, results of operations or financial condition. Further, if we raise funds through future licensing or other similar commercial arrangements with third parties, similar to the J&J License Agreement, we may be required to relinquish valuable rights to our technology, future revenue streams, research programs or drug candidates or may be required to grant licenses on terms that may not be favorable to us and/or may reduce the value of our common stock. Our failure to raise capital as and when needed would have a negative effect on our financial condition and our ability to pursue our business strategy. In addition, attempting to secure additional financing may divert the time and attention of our management from day-to-day activities and harm our development efforts.

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 our clinical trials through all phases of development for PIPE-791 in IPF and Progressive MS and any other drug candidates we select for development;
- costs to complete our Phase 2 clinical trial for PIPE-307 in RRMS and potential additional costs related to PIPE-307 to the extent we have the opportunity and decide to opt-in to fund a portion of all Phase 3 development costs for PIPE-307 in any indication;
- the outcome, timing and cost of meeting regulatory requirements established by the FDA and other comparable foreign regulatory authorities, including any additional clinical trials required by the FDA or other comparable foreign regulatory authorities;
- the willingness of the FDA and other comparable foreign regulatory authorities to accept our clinical trial designs, as well as data from our completed and planned clinical trials and preclinical studies, as the basis for review and approval of PIPE-791 in IPF and/or Progressive MS and any other drug candidates we select for development;
- the costs related to maintaining our collaboration with J&J for the development of PIPE-307;
- the cost of filing, prosecuting, defending, and enforcing our patent claims and other intellectual property rights;
- the cost of defending potential intellectual property disputes, including patent infringement actions brought by third parties against us;
- the effect of competing technological and market developments;

- the cost and timing of completion of commercial-scale manufacturing activities;
- the costs of operating as a public company;
- the cost of making royalty, milestone or other payments under current and any future in-license agreements;
- the extent to which we in-license or acquire other drug candidates, products, technologies or businesses;
- the cost of establishing sales, marketing and distribution capabilities for PIPE-791 and any our drug candidates we develop, if approved; and
- the initiation, progress, and timing of our commercialization of any drug candidate for which we obtain regulatory approval.

Based upon our current operating plan, we believe that our existing cash, cash equivalents, and marketable securities as of the date of this prospectus, together with the estimated net proceeds from this offering, will be sufficient to fund our projected operations through at least the end of 2027. This estimate and our expectation regarding the costs to advance the clinical development of our LPA1R antagonist program, including the completion of our Phase 1b PET imaging trial and Phase 2 clinical trials for our lead drug candidate, PIPE-791, in IPF and Progressive MS, and to complete our existing Phase 2 clinical trial of PIPE-307 for the potential treatment of RRMS and to fund other research and development activities, including the development of our peripherally-restricted LPA1R antagonist drug candidate, CTX-343, are based on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect, or our clinical trials, including our existing and planned clinical trials for PIPE-791, may not achieve the results we expect and may be more expensive, time consuming or difficult to design or implement than we currently anticipate. Our operating runway set forth above also assumes we do not receive any additional payments under our collaboration with J&J for the development of PIPE-307. Changing circumstances, including any unanticipated expenses or development or clinical setbacks, could cause us to consume capital significantly faster than we currently anticipate, and we may need to spend more than currently expected because of circumstances beyond our control. Because the length of time and scope of activities associated with successful development of PIPE-791 in each indication and any other drug candidate we develop and associated with J&J's successful development of PIPE-307 and our resulting receipt of milestone or royalty payments is highly uncertain, we are unable to estimate the actual funds we will require for development, obtaining regulatory approval and marketing and commercialization activities for PIPE-791 and the additional drug candidates we select to develop. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of PIPE-791, or any other drug candidate we develop, or potentially discontinue operations. Further, we may not have sufficient funds, if we have the opportunity, to opt-in to fund a portion of all Phase 3 development costs for PIPE-307 in exchange for higher royalty rates.

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

Until such time, if ever, as we can generate substantial revenues, 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. 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 other securities convertible, exercisable or exchangeable for our common stock, our existing stockholders' ownership

interests will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. In addition, 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 additional collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, like our J&J License Agreement, we may be required to relinquish valuable rights to our technologies, intellectual property, future revenue streams or drug candidates or grant licenses on terms that may not be favorable to us. Furthermore, any capital raising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to advance research programs, product development activities or drug candidates. If we are unable to raise additional funds when needed, we may be required to delay, limit, reduce or terminate drug candidate development or future commercialization efforts.

Risks Related to our Existing Collaboration Agreement and any Collaboration Agreements we may enter into in the Future

If the J&J License Agreement does not result in the successful development of PIPE-307, our business, financial condition and results of operations will be harmed.

In February 2023, we entered into the J&J License Agreement with J&J, pursuant to which we received a non-refundable, non-creditable $50.0 million payment in exchange for granting J&J exclusive worldwide rights to develop, manufacture, and commercialize products containing PIPE-307. Under the J&J License Agreement, we are also eligible to receive future milestone payments and tiered royalties in the low-double digit to high-teen percent range on net sales of products containing PIPE-307. J&J is generally responsible for all development, manufacturing, and commercialization activities for PIPE-307. We are conducting, at our own expense, a Phase 2 clinical trial of PIPE-307 for the potential treatment of RRMS, after which J&J may, in its sole discretion, further develop PIPE-307 for such indication. Therefore, even if our Phase 2 clinical trial of PIPE-307 shows positive results, J&J may decide not to further develop PIPE-307 for the potential treatment of RRMS. Further, J&J may prevent or discontinue such clinical trial if it has good faith concerns that such study presents safety risks or could present material adverse effects for the development or commercialization of PIPE-307 generally. Upon J&J deciding to conduct a first Phase 3 clinical trial for a product using PIPE-307, we have an opt-in right to fund a portion of all Phase 3 development costs and other subsequent development costs for PIPE-307 in exchange for increased royalties.

The success of our collaboration with J&J is dependent on J&J successfully completing clinical trials, obtaining regulatory approval and ultimately successfully manufacturing and commercializing PIPE-307. J&J's activities related to PIPE-307, and the benefits of the collaboration to us, are subject to all the risks relating to product development, regulatory approval and commercialization described in "Risks related to development, clinical testing, and regulatory approval" set forth above. In addition, our collaboration with J&J poses additional risks to us, including the following:

- J&J has significant discretion in determining the efforts and resources that it will apply to the collaboration;
- J&J may not perform its obligations as expected;
- the clinical trials conducted as part of the collaboration may not be successful;
- J&J may not pursue development and/or commercialization of PIPE-307 even if it achieves regulatory approval or may elect not to continue or renew development or commercialization of PIPE-307 based on clinical trial results, changes in J&J's strategic focus or available funding or external factors, such as an acquisition, that divert resources or create competing priorities;

- J&J may delay clinical trials for PIPE-307, provide insufficient funding for its clinical trials, stop a clinical trial or abandon PIPE-307, repeat or conduct new clinical trials or require a new formulation of PIPE-307 for clinical testing;
- we have limited access to, or are restricted from disclosing, certain information regarding J&J's development and commercialization of PIPE-307 as well as our own Phase 2 clinical trial of PIPE-307 for the potential treatment of RRMS and, consequently, we will have limited ability to inform our stockholders about the status or results of the clinical development of PIPE-307, including our existing Phase 2 clinical trial of PIPE-307 and any trial that J&J conducts with PIPE-307;
- J&J could independently develop, or develop with third parties, products that compete directly or indirectly with PIPE-307 if it believes that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than PIPE-307;
- J&J may view any drug candidates we develop by ourselves, or in collaboration with another third party, as competitive with its other drug candidates or products, which may cause J&J to cease to devote resources to the development and commercialization of PIPE-307;
- even if it obtains marketing approval for PIPE-307, J&J may not commit sufficient resources to the marketing, distribution and commercialization of PIPE-307;
- disagreements with J&J, including disagreements over proprietary rights, contract interpretation or the preferred course of development of any programs or drug candidates, may cause delays or termination of the research, development, manufacture or commercialization of PIPE-307, may lead to additional responsibilities for us with respect to the development of PIPE-307 or may result in litigation or arbitration, any of which would be time-consuming and expensive;
- J&J may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation;
- disputes may arise with J&J with respect to the ownership of intellectual property developed pursuant to the collaboration;
- J&J may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; and
- J&J may terminate the collaboration for convenience and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of PIPE-307.

If our collaboration with J&J does not result in the successful development and commercialization of PIPE-307, or if J&J terminates its agreement with us, we may not receive any future milestone or royalty payments under the collaboration. If we do not receive the payments we expect under our collaboration with J&J, our business, financial condition and operating results will be adversely impacted and we may need additional resources to continue to develop PIPE-791 and our other drug candidates.

We may not recognize the financial and other benefits of any additional collaborations or strategic alliances that we may enter into in the future for the development and commercialization of our drug candidates.

The clinical trial and regulatory approval process and the potential manufacturing and commercialization of PIPE-791 in multiple indications and the other drug candidates we select for development will require the investment of substantial additional capital. In addition to the J&J License

Agreement, we may seek and form additional strategic alliances, or create joint ventures or collaborations or enter into acquisitions or additional licensing arrangements with third parties that we believe will help to accelerate or augment our clinical trial, regulatory approval, manufacturing and commercialization efforts with respect to PIPE-791 and any future drug candidates that we elect to develop. These transactions can entail numerous operational and financial risks, and we cannot be certain that we will achieve the financial and other benefits that led us to enter into such arrangements.

We will face significant competition in seeking appropriate collaborators. We may not be successful in our efforts to establish future strategic partnerships or other alternative arrangements for our drug candidates because they may be deemed to be at too early of a stage of development for collaborative effort and third parties may not view our drug candidates as having the requisite potential to demonstrate safety and efficacy. 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. Those factors may include the following:

- the design or results of clinical trials for the drug candidate;
- the likelihood of approval of the drug candidate by the FDA or comparable foreign regulatory authorities;
- the potential market for the drug candidate;
- the costs and complexities of manufacturing and delivering such drug candidate to patients;
- the potential of competing products;
- the existence of uncertainty with respect to our ownership of, or the intellectual protection for, the drug candidate, which can exist if there is a challenge to such ownership or intellectual property rights without regard to the merits of the challenge; and
- industry and market conditions generally.

The collaborator may also consider alternative drug candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our drug candidate. We may also be restricted under any license agreements from entering into agreements on certain terms, or at all, with potential collaborators.

As a result, we may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we do not have sufficient funds, we may not be able to further develop our drug candidates or bring them to market and generate product revenue without collaborations. 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 drug candidates or bring them to market and generate product sales revenue, which would harm our business prospects, financial condition and results of operations.

Even if we do enter into a collaboration agreement for PIPE-791 or another drug candidate we select for development, we may not recognize the potential financial and other benefits of the collaboration. When we collaborate with a third party, we relinquish some or all of the control of the clinical trial and regulatory approval process and the potential manufacturing and commercialization of the drug candidate. In addition, all of the risks relating to product development, regulatory approval and commercialization summarized and described in this prospectus also apply to the activities of our collaborators. Further, the collaborator may terminate its agreement with us. As a result, a collaboration may not result in the successful development and commercialization of our drug candidate, and we may not receive any milestone or royalty payments under the collaboration. If we do not receive the payments we expect under these agreements, our development of drug candidates could be delayed and we may need additional resources to develop our drug candidates.

We may seek to grow our business through in-licensing transactions or otherwise by acquiring drug candidates or complementary products, technologies or businesses. The failure to properly identify these drug candidates, products, technologies or businesses, as well as the failure to successfully complete transactions or to integrate any such drug candidates, products, technologies or businesses that we do in-license or acquire with our existing business, could harm our business, financial condition and operating results.

In the future, we may enter into transactions to in-license or acquire rights to drug candidates or to complementary products or technologies, or to acquire other businesses. Even if we do identify suitable candidates, we may not be able to enter into such transactions on favorable terms, or at all. Any such in-licenses or acquisitions of drug candidates may not result in our ability to successfully develop and obtain regulatory approval for such drug candidates. In addition, any such transactions may not strengthen our financial position or our competitive position or commercialization efforts, and these transactions may be viewed negatively by analysts, investors, customers, or other third parties with whom we have relationships. We may decide to use our available cash resources or incur debt in connection with an in-licensing or acquisition transaction, be required to make significant milestone or royalty payments, or issue our common stock or other equity securities as consideration for the transaction, which would reduce our operating runway or the percentage ownership of our existing stockholders. We could incur losses resulting from undiscovered liabilities of the in-licensed or acquired drug candidate, product technology or the acquired business that are not covered adequately by the indemnification we may obtain from the licensor or seller of such assets or business. In addition, we may not be able to successfully integrate any acquired drug candidates, personnel, technologies, and operations into our existing business in an effective, timely, and nondisruptive manner. Such transactions 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 in-licenses or acquisitions or the effect that any such transactions might have on our business, financial condition and operating results.

Risks Related to our Intellectual Property

If we are unable to obtain, maintain and enforce intellectual property protection for our technology and drug candidates or if the scope of the intellectual property protection we obtain is not sufficiently broad, our competitors could develop and commercialize technology and products similar or identical to ours, and our ability to successfully commercialize and generate revenues from our drug candidates may be adversely affected.

Our success depends in large part on our ability to obtain, maintain and enforce intellectual property protection for the technology and drug candidates we develop. We seek to protect our proprietary position by filing patent applications in the United States and abroad related to our technologies and drug candidates that are important to our business and by in-licensing intellectual property related to such technologies and drug candidates. If we are unable to obtain or maintain patent protection with respect to any proprietary technology or drug candidate, our business, financial condition, results of operations and prospects could be materially harmed.

The patent prosecution process is expensive, time-consuming, and complex, and we may not be able to file, prosecute, maintain, defend, or license all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Moreover, in some circumstances, we do not have the right to control the preparation, filing, and prosecution of patent applications, or to maintain, enforce, and defend the patents, covering technology that we license from third parties. Therefore, these in-licensed patents, and applications may not be prepared, filed, prosecuted, maintained, defended, and enforced in a manner consistent with the best interests of our business.

The patent position of pharmaceutical and biotechnology 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 scope of patent protection outside of the United States is uncertain and laws of foreign countries may not protect our rights to the same extent as the laws of the United States or vice versa. For example, European patent law restricts the patentability of methods of treatment of the human body more than U.S. law does. With respect to both owned and in-licensed patent rights, we cannot predict whether the patent applications we and our licensors are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient protection from competitors. Further, we may not be aware of all third-party intellectual property rights potentially relating to our drug candidates. In addition, publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not published at all. Therefore, neither we nor our licensors can know with certainty whether either we or our licensors were the first to make the inventions claimed in the patents and patent applications we own or in-license now or in the future, or that either we or our licensors were the first to file for patent protection of such inventions. As a result, the issuance, scope, validity, enforceability, and commercial value of our owned and in-licensed patent rights are uncertain. Moreover, our owned and in-licensed pending and future patent applications may not result in patents being issued which protect our technology and drug candidates, 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 and our ability to obtain, protect, maintain, defend, and enforce our patent rights, narrow the scope of our patent protection and, more generally, could affect the value or narrow the scope of our patent rights.

Moreover, we or our licensors may be subject to a third-party pre-issuance submission of prior art to the United States Patent and Trademark Office (USPTO) or become involved in opposition, derivation, revocation, reexamination, *inter partes* review, post-grant review or interference proceedings challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or drug candidates and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize drugs without infringing third-party patent rights. If the breadth or strength of protection provided by our patents and patent applications is threatened, regardless of the outcome, it could dissuade companies from collaborating with us to license, develop or commercialize current or future drug candidates.

Additionally, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted after issuance. Even if our owned and in-licensed patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors from competing with us or otherwise provide us with any competitive advantage. The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and in-licensed patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and drug candidates. Such proceedings also may result in substantial cost and require significant time from our management and employees, even if the eventual outcome is favorable to us. Given the amount of time required for the development, testing and regulatory review of new drug candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. Furthermore, our competitors may be able to circumvent our owned or in-licensed patents by developing similar or alternative technologies or products in a non-infringing manner. As a result, our owned and in-licensed

patent portfolio may not provide us with sufficient rights to exclude others from commercializing technology and products similar or identical to any of our technology and drug candidates.

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

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest United States 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 drug candidates are obtained, once the patent life has expired, we may be open to competition from competitive products, including generics or biosimilars. Given the amount of time required for the development, testing, and regulatory review of new drug 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.

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

In the United States, the patent term of a patent that covers an FDA-approved drug may be eligible for limited patent term extension, which permits patent term restoration as compensation for the patent term lost during the FDA regulatory review process. The Drug Price Competition and Patent Term Restoration Act of 1984, also known as the Hatch-Waxman Act, permits a patent term extension of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time the drug is under regulatory review. Patent extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval. In addition, only one patent applicable to an approved drug may be extended, and only those claims covering the approved drug, a method for using it, or a method for manufacturing it may be extended. Similar provisions are available in Europe and certain other non-United States jurisdictions to extend the term of a patent that covers an approved drug. While, in the future, if and when our drug candidates receive FDA approval, we expect to apply for patent term extensions on patents covering those drug candidates, there is no guarantee that the applicable authorities will agree with our assessment of whether such extensions should be granted, and even if granted, the length of such extensions. We may not be granted patent term extension either in the United States or in any foreign country because of, for example, failing to exercise due diligence during the testing phase or regulatory review process, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents, or otherwise failing to satisfy applicable requirements. Moreover, the term of extension, as well as the scope of patent protection during any such extension, afforded by the governmental authority could be less than we request. If we are unable to obtain any patent term extension or the term of any such extension is less than we request, our competitors may obtain approval of competing products following the expiration of our patent rights, and our business, financial condition, results of operations, and prospects could be materially harmed.

It is possible that we will not obtain patent term extension under the Hatch-Waxman Act for a United States patent covering any of our drug candidates that we may identify even where that patent is eligible for patent term extension, or if we obtain such an extension, it may be for a shorter period than we had sought. Further, for our licensed patents, we may not have the right to control prosecution, including filing with the USPTO, of a petition for patent term extension under the Hatch-Waxman Act. Thus, if one of our licensed patents is eligible for patent term extension under the Hatch-Waxman Act, we may not be able to control whether a petition to obtain a patent term extension is filed, or obtained, from the USPTO.

Also, there are detailed rules and requirements regarding the patents that may be submitted to the FDA for listing in the Approved Drug Products with Therapeutic Equivalence Evaluations (Orange Book). We may be unable to obtain patents covering our drug candidates that contain one or more claims that satisfy the requirements for listing in the Orange Book. Even if we submit a patent for listing in the Orange Book, the FDA may decline to list the patent, or a manufacturer of generic drugs may challenge the listing. If one of our drug candidates is approved and a patent covering that drug candidate is not listed in the Orange Book, a manufacturer of generic drugs would not have to provide advance notice to us of any abbreviated new drug application filed with the FDA to obtain permission to sell a generic version of such drug candidate.

Changes to patent laws in the United States and other jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our products.

Changes in either the patent laws or interpretation of patent laws in the United States, including patent reform legislation such as the Leahy-Smith America Invents Act (Leahy-Smith Act) could increase the uncertainties and costs surrounding the prosecution of our owned and in-licensed patent applications and the maintenance, enforcement, or defense of our owned and in-licensed issued patents. The Leahy-Smith Act includes a number of significant changes to United States patent law. These changes include provisions that affect the way patent applications are prosecuted, redefine prior art, provide more efficient and cost-effective avenues for competitors to challenge the validity of patents, and enable third-party submission of prior art to the USPTO during patent prosecution, and additional procedures to attack the validity of a patent at USPTO-administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. Assuming that other requirements for patentability are met, prior to March 2013, in the United States, the first to invent the claimed invention was entitled to the patent, while outside the United States, the first to file a patent application was entitled to the patent. After March 2013, under the Leahy-Smith Act, the United States transitioned to a first-to-file system in which, assuming that the other statutory requirements for patentability are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. As such, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

In addition, the patent positions of companies in the development and commercialization of biologics and pharmaceuticals are particularly uncertain. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. This combination of events has created uncertainty with respect to the validity and enforceability of patents once obtained. Depending on future actions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could have a material adverse effect on our patent rights and our ability to protect, defend and enforce our patent rights in the future.

If we are unable to obtain licenses from third parties on commercially reasonable terms or fail to comply with our obligations under such agreements, our business could be harmed.

It may be necessary for us to use the patented or proprietary technology of third parties to commercialize our products, in which case we would be required to obtain a license from these third parties. If we are unable to license such technology, or if we are forced to license such technology on unfavorable terms, our business could be materially harmed. If we are unable to obtain a necessary license, we may be unable to develop or commercialize the affected drug candidates, which could materially harm our business and the third parties owning such intellectual property rights could seek

either an injunction prohibiting our sales or an obligation on our part to pay royalties and/or other forms of compensation. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us.

If we are unable to obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may be required to expend significant time and resources to redesign our technology, drug candidates, or the methods for manufacturing them or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis. If we are unable to do so, we may be unable to develop or commercialize the affected technology and drug candidates, which could harm our business, financial condition, results of operations, and prospects significantly.

Additionally, if we fail to comply with our obligations under license agreements, our counterparties may have the right to terminate these agreements, in which event we might not be able to develop, manufacture or market, or may be forced to cease developing, manufacturing or marketing, any product that is covered by these agreements or may face other penalties under such agreements. Such an occurrence could materially adversely affect the value of the drug candidate being developed under any such agreement. Termination of these agreements or reduction or elimination of our rights under these agreements, or restrictions on our ability to freely assign or sublicense our rights under such agreements when it is in the interest of our business to do so, may result in our having to negotiate new or reinstated agreements with less favorable terms, cause us to lose our rights under these agreements, including our rights to important intellectual property or technology, or impede, or delay or prohibit the further development or commercialization of, one or more drug candidates that rely on such agreements.

Although we are not currently involved in any litigation, we may become involved in lawsuits to protect or enforce our patent or other intellectual property rights, which could be expensive, time-consuming and unsuccessful.

Competitors and other third parties may infringe, misappropriate or otherwise violate our issued patents or other intellectual property. As a result, we may need to file infringement, misappropriation or other intellectual property related claims, which can be expensive and time-consuming. Any claims we assert against perceived infringers could provoke such parties to assert counterclaims against us alleging that we infringe, misappropriate or otherwise violate their intellectual property. In addition, in a patent infringement proceeding, such parties could counterclaim that the patents we have asserted are invalid or unenforceable. In patent litigation in the United States, 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, including lack of novelty, obviousness, or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. Third parties may institute such claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, post-grant review, *inter partes* review, interference proceedings, derivation proceedings, and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). The outcome following legal assertions of invalidity and unenforceability is unpredictable.

An adverse result in any such proceeding could put one or more of our owned patents at risk of being invalidated or interpreted narrowly and could put any of our owned patent applications at risk of not yielding an issued patent. A court may also refuse to stop the third party from using the technology at issue in a proceeding on the grounds that our owned patents do not cover such technology. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information or trade secrets could be

compromised by disclosure during this type of litigation. Any of the foregoing could allow such third parties to develop and commercialize competing technologies and products and have a material adverse impact on our business, financial condition, results of operations, and prospects.

Interference or derivation proceedings provoked by third parties or brought by us or declared by the USPTO may be necessary to determine the priority of inventions with respect to our patents or patent applications. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms or at all, or if a non-exclusive license is offered and our competitors gain access to the same technology. Our defense of litigation or interference or derivation proceedings may fail and, even if successful, may result in substantial costs, and distract our management and other employees. In addition, the uncertainties associated with litigation could have a material adverse effect on our ability to raise the funds necessary to continue our clinical trials, continue our research programs, license necessary technology from third parties, or enter into development partnerships that would help us bring our drug candidates to market.

Furthermore, 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 perceive these results to be negative, it could have a material adverse effect on the price of our Class A common stock.

Third parties may initiate legal proceedings alleging that we are infringing, misappropriating or otherwise violating their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Our commercial success depends upon our ability to develop, manufacture, market and sell our drug candidates and use our proprietary technologies without infringing, misappropriating or otherwise violating the intellectual property and proprietary rights of third parties. There is considerable patent and other intellectual property litigation in the pharmaceutical and biotechnology industries. We may become party to, or threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our technology and drug candidates, including interference proceedings, post grant review, *inter partes* review, and derivation proceedings before the USPTO and similar proceedings in foreign jurisdictions such as oppositions before the European Patent Office. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are pursuing development candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our technologies or drug candidates that we may identify may be subject to claims of infringement of the patent rights of third parties.

The legal threshold for initiating litigation or contested proceedings is low, so that even lawsuits or proceedings with a low probability of success might be initiated and require significant resources to defend. Litigation and contested proceedings can also be expensive and time-consuming, and our adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we can. The risks of being involved in such litigation and proceedings may increase if and as our drug candidates near commercialization and as we gain the greater visibility associated with being a public company. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future, regardless of merit. We may not be aware of all such intellectual property rights potentially relating to our technology and drug candidates and their uses, or we may incorrectly conclude that third party intellectual property is

invalid or that our activities and drug candidates do not infringe such intellectual property. Thus, we do not know with certainty that our technology and drug candidates, or our development and commercialization thereof, do not and will not infringe, misappropriate or otherwise violate any third party's intellectual property.

Third parties may assert that we are employing their proprietary technology without authorization. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the discovery, use or manufacture of the drug candidates that we may identify or related to our technologies. Because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that the drug candidates that we may develop may be found to infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. Moreover, as noted above, there may be existing patents that we are not aware of or that we have incorrectly concluded are invalid or not infringed by our activities. If any third-party patents were held by a court of competent jurisdiction to cover, for example, the manufacturing process of the drug candidates that we may develop, any molecules formed during the manufacturing process or any final product itself, the holders of any such patents may be able to block our ability to commercialize such drug candidate unless we obtained a license under the applicable patents, or until such patents expire.

Parties making claims against us may obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize the drug candidates that we may identify. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, pay royalties, redesign our infringing products, or obtain one or more licenses from third parties, which may be impossible or require substantial time and monetary expenditure.

We may choose to take a license or, if we are found to infringe, misappropriate or otherwise violate a third party's intellectual property rights, we could also be required to obtain a license from such third party to continue developing, manufacturing and marketing our technology and drug candidates. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us and could require us to make substantial licensing and royalty payments. We could be forced, including by court order, to cease developing, manufacturing and commercializing the infringing technology or product. In addition, we could be found liable for significant monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent or other intellectual property right and could be forced to indemnify our customers or collaborators. A finding of infringement could prevent us from commercializing our drug candidates or force us to cease some of our business operations, which could materially harm our business. In addition, we may be forced to redesign our drug candidates, seek new regulatory approvals, and indemnify third parties pursuant to contractual agreements. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar material adverse effect on our business, financial condition, results of operations, and prospects.

Intellectual property litigation or other legal proceedings relating to intellectual property could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

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 perceive these results to be negative, it could have a substantial adverse effect on the price of our Class A common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing, or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and may also have an advantage in such proceedings due to their more mature and developed intellectual property portfolios. Uncertainties resulting from the initiation and continuation of intellectual property litigation or other proceedings could compromise our ability to compete in the marketplace.

Obtaining and maintaining 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 noncompliance with these requirements.

Periodic maintenance, renewal and annuity fees and various other government fees on any issued patent and pending patent application must be paid to the USPTO and foreign patent agencies in several stages or annually over the lifetime of our owned and in-licensed patents and patent applications. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. In certain circumstances, we rely on our licensing partners to pay these fees to, or comply with the procedural and documentary rules of, the relevant patent agency. With respect to our patents, we rely on an annuity service, outside firms, and outside counsel to remind us of the due dates and to make payment after we instruct them to do so. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. In such an event, potential competitors might be able to enter the market with similar or identical products or technology. If we or our licensors fail to maintain the patents and patent applications covering our drug candidates, it would have a material adverse effect on our business, financial condition, results of operations, and prospects.

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

Filing, prosecuting, and defending patents on drug candidates in all countries throughout the world would be prohibitively expensive. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States, and even where such protection is nominally available, judicial and governmental enforcement of such intellectual property rights may be lacking. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection or licenses, but enforcement is not as strong as that in the United States. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our intellectual property and proprietary rights generally. In addition, certain jurisdictions do not protect, to the same extent or at all, inventions that constitute new methods of treatment.

Proceedings to enforce our intellectual property and proprietary rights in foreign jurisdictions 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, could put 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 and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

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

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

We or our licensors may be subject to claims that former employees, collaborators or other third parties have an interest in our owned or in-licensed patents, trade secrets, or other intellectual property as an inventor or co-inventor. For example, we or our licensors may have inventorship disputes arise from conflicting obligations of employees, consultants or others who are involved in developing our drug candidates. Litigation may be necessary to defend against these and other claims challenging inventorship or our or our licensors' ownership of our owned or in-licensed patents, trade secrets, or other intellectual property. If we or our licensors fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, intellectual property that is important to our drug candidates. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may be subject to claims by third parties asserting that our employees, consultants or contractors have wrongfully used or disclosed confidential information of third parties, or we have wrongfully used or disclosed alleged trade secrets of their current or former employers, or claims asserting we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees, consultants and contractors were previously employed at universities or other pharmaceutical or biotechnology companies, including potential competitors. Although we try to ensure that our employees, consultants, and contractors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that these individuals or we have used or disclosed intellectual property, including trade secrets or other proprietary information, of any

such individual's current or former employer. Litigation may be necessary to defend against these claims.

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

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel, which could have a material adverse effect on our competitive business position and prospects. Such intellectual property rights could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or products, which license may not be available on commercially reasonable terms, or at all, or such license may be non-exclusive. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to our management and employees.

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

In addition to seeking patents for some of our technology and drug candidates, we also rely on trade secrets and confidentiality agreements to protect our unpatented know-how, technology, and other proprietary information, to maintain our competitive position. We seek to protect our trade secrets and other proprietary technology, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors, and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. We cannot guarantee that we have entered into such agreements with each party that may have or has had access to our trade secrets or proprietary technology. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Detecting the disclosure or misappropriation of a trade secret and enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive, and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside of the United States are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor or other third party, our competitive position would be materially and adversely harmed.

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.

Our registered and unregistered trademarks or trade names may be challenged, infringed, circumvented, or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition among potential collaborators or customers in our markets of interest. At times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and

possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trade names or trademarks that incorporate variations of our unregistered trade names or trademarks. Over the long term, if we are unable to successfully register our trade names and trademarks and establish name recognition based on our trade names and trademarks, 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 trade names and trademarks may be ineffective and could result in substantial costs and diversion of resources and could adversely impact our financial condition or results of operations.

Intellectual property rights do not necessarily address all potential threats.

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

- we, or our license partners or current or future collaborators, might not have been the first to file patent applications covering certain of our or their inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our owned or in-licensed intellectual property rights;
- it is possible that our owned and in-licensed pending patent applications or those we may own or in-license in the future will not lead to issued patents;
- issued patents that we hold rights to may be held invalid or unenforceable, including as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we cannot ensure that any of our pending patent applications, if issued, or those of our licensors, will include claims having a scope sufficient to protect our drug candidates;
- we cannot ensure that any patents issued to us or our licensors will provide a basis for an exclusive market for our commercially viable drug candidates or will provide us with any competitive advantages;
- we cannot ensure that our commercial activities or drug candidates will not infringe upon the patents of others;
- we cannot ensure that we will be able to successfully commercialize our drug candidates on a substantial scale, if approved, before the relevant patents that we own, or license expire;
- we may not develop additional proprietary technologies that are patentable;
- the patents of others may harm our business; and
- we may choose not to file a patent in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property.

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

Risks Related to our Dependence on Third Parties

We currently rely on third-party CMOs for the production of clinical supplies of PIPE-791 and PIPE-307 and we intend to rely on CMOs for our future drug candidates, as well as to supply the raw materials necessary to produce our drug candidates. We may elect to continue to rely on CMOs for the production of commercial supplies of PIPE-791, if approved. Our dependence on CMOs may impair our development of drug candidates and may impair their commercialization, which would adversely impact our business and financial position.

We do not own facilities to manufacture PIPE-791, PIPE-307 or any of our drug candidates in development. Instead, we rely on and expect to continue to rely on CMOs for the supply of cGMP grade clinical trial materials of PIPE-791 and any other drug candidates we develop. We have relied on CMOs to supply the clinical trial materials for our Phase 2 clinical trial of PIPE-307 and, going forward, J&J may continue to rely on CMOs for the future development, manufacture and potential commercialization of PIPE-307. We intend to continue to rely on CMOs for the production of commercial supplies of PIPE-791, if approved. Reliance on CMOs may expose us to more risk than if we were to manufacture our drug candidates ourselves. If any CMO we engage is unable to provide sufficient supply of any drug candidate we develop, we may be unable to arrange for an alternative supply or to do so on commercially reasonable terms or in a timely manner, which could delay any clinical trials, the commercial launch of a drug candidate, if approved, or, regarding any commercial supply, result in a shortage in supply that could negatively impact our revenues. Transitioning to a new CMO for a drug candidate is time consuming and costly. We have identified, but have not contracted with, other CMOs as back-up for the manufacture and supply of PIPE-791. As a result, if the CMO currently involved in the manufacture and supply of PIPE-791 experiences a delay or disruption, we may not have sufficient quantities of PIPE-791 for our clinical trials and may not be able to transition to a new CMO in a timely or cost- effective manner, or at all, which would negatively impact our ability to develop, complete our planned clinical trials for PIPE-791.

Similarly, we contract for the supply of the active pharmaceutical ingredients (APIs) and other raw materials necessary to produce PIPE-791. We currently intend to contract in the future for the supply of these APIs and other raw materials for any other drug candidate we develop. Supplies of our APIs or other raw materials could be interrupted from time to time and we cannot be certain that alternative supplies could be obtained within a reasonable time frame, at an acceptable cost, or at all. In addition, a disruption in the supply of any required API or other raw material could delay the commencement of a planned clinical trial or the delay the commercial launch of a drug candidate, if approved, or result in a shortage in supply, which would impair our ability to generate revenues. Growth in the costs and expenses of our APIs or other raw materials may also impair our ability to cost-effectively manufacture a drug candidate. In addition, there may be a limited number of suppliers for the APIs or other raw materials that we may use to manufacture a drug candidate, and we cannot be certain that we will be able to engage such suppliers in a timely manner or at all. If we are unable to do so, clinical development of a drug candidate, commercialization for any approved product, or our business could be adversely affected.

The facilities used to manufacture the drug candidates we develop, as well as the included APIs, must be inspected by the FDA and comparable foreign regulatory 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 dependent on, our CMOs for compliance with cGMP requirements for the manufacture of a drug candidate. In addition, we have limited control over the ability of our CMOs to maintain adequate quality control, quality assurance, and qualified personnel, and we were not involved in developing our CMOs' policies and procedures. As a result, we are subject to the risk that a drug candidate 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 the drug candidate in clinical trials, or for commercial distribution of the drug candidate, if approved.

If the FDA or comparable foreign regulatory authority finds deficiencies with or does not approve these facilities for the manufacture of the drug candidates we develop 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 planned clinical trials and significantly impact our ability to develop, obtain regulatory approval for, or commercialize such drug candidates, if approved. In addition, any failure to achieve and maintain compliance with laws, regulations, and standards related to manufacturing could subject us to risks, including the risk that we may have to suspend the manufacture of a drug candidate, that obtained approvals could be revoked, and that the FDA or another governmental regulatory authority may take enforcement actions, including untitled letters, warning letters, seizures, injunctions, or product recalls. Foreign CMOs may be subject to U.S. legislation, including the proposed BIOSECURE Act, sanctions, trade restrictions and other foreign regulatory requirements which could increase the cost or reduce the supply of material available to us, delay the procurement or supply of such material or have an adverse effect on our ability to manufacture our drug candidates. 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.

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 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 the drug candidate to complete the clinical trial, any significant delay in the supply of the drug candidate or the raw materials needed to produce the drug candidate, could adversely affect our business in a number of ways, including but not limited to:

- an inability to initiate or continue clinical trials of our drug candidates under development;
- delay in submitting regulatory applications, or receiving marketing approvals, for our drug candidates;
- loss of the cooperation of an existing or future collaborator;
- subjecting third-party manufacturing facilities or our manufacturing facilities to additional inspections by regulatory authorities;
- economic loss and additional costs resulting from starting materials, intermediates, API or drug product that cannot be used in clinical trials or for other purposes;
- requirements to cease development or to recall batches of our drug candidates; and
- in the event of approval to market and commercialize our drug candidates, an inability to meet commercial demands for our product or any other future drug candidates.

As part of their manufacture of our drug 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, complete our planned clinical trials, obtain regulatory approval for, or commercialize a drug candidate, if approved.

We rely on third parties to conduct our ongoing clinical trials of PIPE-791 and PIPE-307 and expect to rely on third parties to conduct future clinical trials of PIPE-791 and any other drug candidates that we develop. If these third parties do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize the drug candidates we develop and our business could be substantially harmed.

We do not have the ability to independently conduct clinical trials. We rely and expect to continue to rely on medical institutions, clinical investigators, contract laboratories and other third parties, such as CROs, to conduct or otherwise support clinical trials for the drug candidates we develop. We may also rely on academic and private non-academic institutions to conduct and sponsor clinical trials relating to these drug candidates. We will not control the design or conduct of the investigator-sponsored trials, and it is possible that the FDA or non-U.S. regulatory authorities will not view these investigator-sponsored trials as providing adequate support for future clinical trials, whether controlled by us or third parties, for any one or more reasons, including elements of the design or execution of the trials or safety concerns or other trial results.

Such arrangements will likely provide us certain information rights with respect to the investigator-sponsored trials, including access to and the ability to use and reference the data, including for our own regulatory filings, resulting from the investigator-sponsored trials. However, we would not have control over the timing and reporting of the data from investigator-sponsored trials, nor would we own the data from the investigator-sponsored trials. If we are unable to confirm or replicate the results from the investigator-sponsored trials or if negative results are obtained, we would likely be further delayed or prevented from advancing further clinical development of our drug candidates. Further, if investigators or institutions breach their obligations with respect to the clinical development of our drug candidates, or if the data prove to be inadequate compared to the first-hand knowledge we might have gained had the investigator-sponsored trials been sponsored and conducted by us, then our ability to design and conduct any future clinical trials ourselves may be adversely affected.

We rely and expect to continue to rely heavily on these parties for execution of clinical trials for the drug candidates we develop and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on CROs will not relieve us of our regulatory responsibilities. For any violations of laws and regulations during the conduct of our clinical trials, we could be subject to warning letters or enforcement action that may include civil penalties up to and including criminal prosecution.

We, our principal investigators and our CROs are required to comply with regulations, including GCPs for conducting, monitoring, recording and reporting the results of clinical trials to ensure that the data and results are scientifically credible and accurate, and that the trial patients are adequately informed of the potential risks of participating in clinical trials and their rights are protected. These regulations are enforced by the FDA and similar regulatory authorities in foreign countries. These regulatory authorities enforce GCP regulations through periodic inspections of clinical trial sponsors, principal investigators and trial sites. If we, our principal investigators or our CROs fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or similar foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, these regulatory authorities will determine that any of our future clinical trials will comply with GCPs. In addition, our clinical trials must be conducted with drug candidates produced under cGMP regulations. Our failure or the failure of our principal investigators or CROs to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process and could also subject us to
enforcement action. We also are required to register ongoing clinical trials and post the results of

completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within certain timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Although we designed our first-in-human clinical trials of PIPE-791 and PIPE-307, and intend to design the future clinical trials for the drug candidates that we develop, we expect that CROs will conduct all of our clinical trials. J&J will be responsible for designing any future clinical trials of PIPE-307. As a result, many important aspects of our development programs, including their conduct and timing, are outside of our direct control. Our reliance on third parties to conduct future clinical trials also results in less direct control over the management of data developed through clinical trials than would be the case if we were relying entirely upon our own staff. Communicating with outside parties can also be challenging, potentially leading to mistakes as well as difficulties in coordinating activities. Outside parties may:

- have staffing difficulties;
- fail to comply with contractual obligations;
- experience regulatory compliance issues;
- undergo changes in priorities or become financially distressed; or
- form relationships with other entities, some of which may be our competitors.

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

If any of our relationships with these third-party principal investigators or CROs terminate, we may not be able to enter into arrangements with alternative CROs. If principal investigators or CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, any clinical trials such principal investigators or CROs are associated with may be extended, delayed or terminated, and we may not be able to obtain regulatory approval for or successfully commercialize our drug candidates. As a result, we believe that our financial results and the commercial prospects for our drug candidates in the subject indication would be harmed, our costs could increase and our ability to generate revenue could be delayed.

We intend to rely on CROs, and other third parties to conduct our preclinical studies. 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, to conduct preclinical studies on the drug candidates we develop. Our reliance on CROs for preclinical development activities limits our control over these activities and we were not involved in developing our CRO’s policies and procedures, but we remain responsible for ensuring that each of our preclinical studies 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 GLP requirements for our preclinical studies, which are regulations and guidelines enforced by the FDA and are also required by

comparable foreign regulatory authorities. Our CROs are not our employees, and we do not control whether they devote sufficient time and resources to our preclinical studies. Our CROs may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting preclinical studies, 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, or fail to meet expected deadlines, or if the quality or accuracy of the preclinical data they obtain is compromised due to the failure to adhere to our protocols or regulatory requirements or for any other reason, our ability to generate the preclinical data to advance the development of our drug candidates will be harmed.

If our relationship with any CROs terminates, 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 preclinical 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.

Our third-party manufacturers may be unable to successfully scale-up manufacturing of our drug candidates in sufficient quality and quantity, which could delay or prevent us from developing our drug candidates and commercializing approved products, if any.

In order to conduct clinical trials for the drug candidates we are developing, we will need to manufacture them in large quantities. Quality issues may arise during scale-up activities. Our reliance on a limited number of manufacturers, the complexity of drug manufacturing and the difficulty of scaling up a manufacturing process could cause the delay of clinical trials, regulatory submissions, required licensure, or commercialization of our drug candidates, cause us to incur higher costs and prevent us from commercializing our drug candidates successfully. Furthermore, if our manufacturing partners fail to deliver the required commercial quality and quantities of materials on a timely basis and at commercially reasonable prices, and we are unable to secure one or more replacement manufacturer capable of production in a timely manner at a substantially equivalent cost, then testing and clinical trials of that drug candidate may be delayed or infeasible, and regulatory licensure or commercial launch of any resulting product may be delayed or not obtained, which could significantly harm our business.

Manufacturing of the API for PIPE-791 takes place in China, through a sole third-party manufacturer. A significant disruption in the operation of this manufacturer could materially adversely affect our business, financial condition and results of operations.

We currently contract manufacturing operations to third parties, and the manufacturing of the API for PIPE-791 is completed by a third party located in China. Any disruption in production or inability of this manufacturer to produce adequate quantities to meet our needs could impair our ability to further development of PIPE-791. Furthermore, since this third-party manufacturer is located in China, we are exposed to the possibility of product supply disruption and increased costs in the event of changes in the policies of the U.S. or Chinese governments, political unrest or unstable economic conditions in China. For example, a trade war could lead to tariffs on the chemical intermediates we use that are manufactured in China. Any of these matters could materially and adversely delay our development efforts and affect our business and results of operations. Any recall of the manufacturing lots or similar action regarding the drug candidates we are studying in our clinical trials could delay the trials or detract from the integrity of the trial data and its potential use in future regulatory filings.

Our employees and independent contractors, including principal investigators, 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, CROs, consultants, vendors, and any third parties we may engage in connection with development and commercialization of the drug candidates we develop, could engage in misconduct, including intentional, reckless, or negligent conduct or unauthorized activities that violate applicable laws, rules, and regulations including: 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 or other 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 agency could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us or them 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, 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.

Risks Related to Healthcare Laws and Other Legal Compliance Matters

Recent and future changes in healthcare legislation and regulations may increase the difficulty and cost to obtain marketing approval for a drug candidate, increase the costs to commercialize an approved product, and adversely affect the price set for such product.

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 to the healthcare system that could impact the future results of our operations. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels with the stated objective to reduce healthcare costs and improve the quality of healthcare. For example, in March 2010, the Patient Protection and Affordable Care Act (ACA) was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers. Provisions of the ACA with importance to the biotechnology and pharmaceutical industries include, among others:

- an annual, non-deductible fee payable by any entity that manufactures or imports certain branded prescription drugs or biologic agents;

- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;
- the requirement of a distinct calculation for rebates owed by manufacturers under the Medicaid Drug Rebate Program for drugs and biologics that are inhaled, infused, instilled, implanted, or injected; and
- a Medicare Part D coverage gap discount program, under which manufacturers must agree to offer certain discounts on applicable branded drugs to eligible beneficiaries during their coverage gap period.

The ACA and its implementation continue to evolve as a result of legislative, administrative, and judicial developments. Further changes remain possible, which may potentially negatively affect pricing, coverage, or reimbursement for PIPE-791 and/or PIPE-307.

In addition to the ACA, U.S. governments continue to seek to adopt healthcare policies and reforms intended to curb healthcare costs, such as federal or state controls on payment for drugs (including under Medicare, Medicaid, and commercial health plans). For example, the Budget Control Act of 2011 resulted in aggregate reductions, or sequestration, of Medicare payments to providers. Sequestration is currently set at 2% and will increase to 2.25% for the first half of fiscal year 2030, to 3% for the second half of fiscal year 2030, and to 4% for the remainder of the sequestration period that lasts through the first six months of fiscal year 2031. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, adjusted 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.

More recently, the Inflation Reduction Act of 2022 (IRA) requires, among other things, the U.S. Secretary of the Department of Health and Human Services (HHS) to negotiate, with respect to Medicare units and subject to a specified cap, called the Maximum Fair Price, the price of a set number of certain high spend Medicare Part B and D drugs and biologicals per year, with prices taking effect starting in 2026. Though the IRA explicitly excludes from price negotiation orphan drugs designated for only one rare disease or condition and for which the only active approved indication is for such disease or condition, drugs with multiple orphan designations are not explicitly excluded from drug price negotiation, which may affect the profitability of pursing multiple indications for an orphan drug. Any failure to comply with requirements under the drug price negotiation program could subject us to an excise tax and/or a civil monetary penalty. The IRA also makes several changes to the Medicare Part D benefit, including capping patient out-of-pocket spending at $2,000 beginning in 2025, while imposing new discount obligations for pharmaceutical manufacturers and payors, which could negatively affect our business and financial condition. If we are not in compliance with obligations under the Medicare Part D benefit redesign, we could be subject to civil monetary penalties. In addition, the IRA establishes Medicare Part B and Part D inflation rebate schemes, under which manufacturers will owe rebates to Medicare if, generally speaking, the average sales price of a Part B drug, or the average manufacturer price of a Part D drug, increases faster than the pace of inflation. The failure to timely pay an inflation rebate may result in a civil monetary penalty. Since the IRA was enacted, the Centers for Medicare and Medicaid Services (CMS) has taken various steps to implement the drug pricing provisions of the law. This includes releasing a list of Medicare Part B products that had an adjusted coinsurance rate based on the inflationary rebate provisions of the IRA for the time period of October 1, 2023 to December 31, 2023 in September 2023; on June 30, 2023, issuing guidance detailing the requirements and parameters of the first round of price negotiations, to take place during 2023 and 2024, for products subject to the “maximum fair price” provision that would become effective in 2026; and, on August 29, 2023, releasing the initial list of 10 drugs subject to price negotiations. While it remains to be seen how the drug pricing provisions imposed by the IRA will affect

the broader pharmaceutical industry (including orphan drug development), several pharmaceutical manufacturers and other industry stakeholders have challenged the law, including through lawsuits brought against the HHS, the Secretary of HHS, CMS, and the CMS Administrator challenging the constitutionality and administrative implementation of the IRA's drug price negotiation provisions. The IRA and any other similar laws introduced in the future may result in additional reductions in Medicare and other healthcare funding, which could negatively affect our future revenues and results of operations.

Individual states in the United States have also become increasingly aggressive in seeking to pass legislation and implementing regulations designed to control pharmaceutical and biological product pricing. Such measures could harm our business, results of operations, financial condition, and prospects. For example, an emerging trend at the state level is the establishment of prescription drug affordability boards, some of which will prospectively permit certain states to establish upper payment limits for drugs that the state has determined to be "high-cost". We expect that additional state reform measures will be adopted in the future, any of which could limit the amounts that state governments will pay for healthcare products and services, which could result in reduced demand or lower pricing for our drug candidates, or additional pricing pressures.

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 drug 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 contractors, investigators, healthcare professionals, consultants, third-party payors, patient organizations, customers, and others will be subject to applicable healthcare regulatory laws, which could expose us to penalties.

Our business operations and current and future arrangements with contractors, 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 drug candidates, as well as our customer support and physician consulting arrangements. Such laws include:

- the U.S. federal Anti-Kickback Statute (AKS), a criminal law which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving, or providing any remuneration (including any kickback, bribe, or anything of value), 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, arrangement, 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 AKS has been interpreted to apply to arrangements between pharmaceutical manufacturers or their agents and prescribers, purchasers and formulary or benefit managers, among other parties;
- the U.S. federal false claims and civil monetary penalties laws, including the False Claims Act (FCA), which prohibits any person from, among other things, knowingly presenting, or causing

to be presented false or fraudulent claims for payment of government funds; knowingly making, using or causing to be made or used, a false record or statement material to an obligation to pay money to the government or knowingly and improperly avoiding, decreasing or concealing an obligation to pay money to the U.S. federal government. In addition, any claims submitted as a result of a violation of the AKS constitute false claims and are subject to enforcement under the FCA. Pharmaceutical 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 FCA can be enforced by the U.S. Department of Justice or through whistleblower or *qui tam* actions filed by private citizens on behalf of the federal government;

- certain criminal provisions enacted as part of the U.S. federal Health Insurance Portability and Accountability Act of 1996, as amended (HIPAA), prohibit, among other things, knowingly and willfully executing or attempting to execute a scheme to defraud any healthcare benefit program, knowingly and willfully embezzling or stealing from a health care benefit program, willfully obstructing a criminal investigation of a health care offense, or knowingly and willfully making false statements relating to healthcare matters, regardless of the payor (e.g., public or private). Similar to the AKS, 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 and the respective implementing regulations, which impose, among other things, specified requirements relating to privacy, security and breaches of individually identifiable health information 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 creation, receipt, maintenance, or transmission of protected health information. HIPAA provides for criminal penalties, as well as civil monetary penalties, and is enforced by the Office of Civil Rights within the HHS as well as state attorneys general, which can file civil actions for damages or injunctions in federal courts 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;
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers;
- the U.S. federal Physician Payments Sunshine Act, enacted as part of the ACA, 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, along with others, to track and report annually to the government information related to certain payments and other transfers of value to U.S.-licensed physicians, physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, anesthesiology assistants certified nurse-midwives, and teaching hospitals, as well as ownership and investment interests held by certain physicians and their immediate family members in the manufacturer;
- the federal Civil Monetary Penalties Law, which authorizes the imposition of substantial monetary penalties against an entity, such as a pharmaceutical manufacturer, that engage in activities including, among others (1) knowingly presenting, or causing to be presented, a claim for services not provided as claimed or that is otherwise false or fraudulent in any way; (2) arranging for or contracting with an individual or entity that is excluded from participation in federal health care programs to provide items or services reimbursable by a federal health care program; (3) violations of the AKS; or (4) failing to report and return a known overpayment;
- analogous U.S. state laws and regulations, including: state anti-kickback and false claims laws, which may apply to 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 that require the tracking of gifts and other remuneration and items of value provided to healthcare professionals and entities; and state laws governing privacy, security, and breaches 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. For example, the California Consumer Privacy Act (CCPA), as amended by the California Privacy Rights Act (CPRA), establishes certain requirements for data use and sharing transparency and provides California consumers (as defined in the law) certain rights concerning the use, disclosure, and retention of their personal data. Such rights include rights to access and delete personal information, opt out of certain personal information sharing, and receive detailed information about how personal information is used. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches—involving certain types of personal information—that is expected to increase data breach litigation. The CCPA may increase our compliance costs and potential liability. Numerous other states, such as Virginia, Colorado, Utah, and Connecticut, have enacted privacy laws similar to the CCPA, and some states, like Washington, have enacted health privacy specific laws that grant heightened rights with respect to health information;

- similar healthcare laws and regulations in the European Union, or EU, and other jurisdictions, including reporting requirements detailing interactions with and payments to healthcare providers and laws governing the privacy and security of personal information, such as, where applicable, the General Data Protection Regulation, including as implemented in the UK, or GDPR, which imposes obligations and restrictions on the processing of personal data relating to individuals located in the European Union (EU) and the European Economic Area (EEA) (including health data); and
- laws and regulations prohibiting bribery and corruption such as the U.S. Foreign Corrupt Practices Act of 1977, as amended (FCPA), which, among other things, prohibits U.S. companies and their employees and agents from authorizing, promising, offering, or providing, directly or indirectly, corrupt or improper payments or anything else of value to foreign government officials, employees of public international organizations or foreign government-owned or affiliated entities, candidates for foreign public office, and foreign political parties or officials thereof.

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 healthcare providers, 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 actions including the imposition of civil, criminal, and administrative penalties, damages (potentially up to treble damages), disgorgement, monetary fines, 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 noncompliance 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. 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 adversely affected.

Any clinical trial programs, marketing, or research collaborations in the European Economic Area will subject us to the GDPR.

The GDPR applies to companies established in the EEA, as well as to companies that are not established in the EEA and which, *inter alia*, collect and use personal data in relation to (i) offering goods or services to, or (ii) monitoring the behavior of, individuals located in the EEA. If we conduct clinical trial programs in the EEA (whether the trials are conducted directly by us or through a clinical vendor or collaborator), or enter into research collaborations involving the monitoring of individuals in the EEA, or market our products to individuals in the EEA, we will be subject to the GDPR. The GDPR puts in place 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 (or reliance on another appropriate legal basis), the provision of robust and detailed disclosures to individuals about how personal data is collected and processed (in a concise, intelligible and easily accessible form), a comprehensive individual data rights regime (including access, erasure, objection, restriction, rectification and portability), maintaining a record of data processing, data export restrictions governing transfers of data from the EEA, short timelines for certain data breach notifications to be given to data protection regulators or supervisory authorities (and in certain cases, affected individuals), and limitations on retention of personal data. The GDPR also puts in place increased requirements pertaining to health data and other special categories of personal data, and includes within scope, pseudonymized (i.e., key-coded) data. Further, the GDPR provides that EEA member states may establish their own laws and regulations limiting the processing of genetic, biometric, or health data, which could limit our ability to collect, use, and share such data and/or could cause our costs to increase. In addition, there are certain obligations if we contract third-party processors in connection with the processing of personal data. If our or our collaborators' 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, or fines of up to 20 million Euros or up to 4% of our total worldwide annual revenue of the preceding financial year, whichever is higher, as well as compensation claims by affected individuals, including class-action type litigation, negative publicity, reputational harm and a potential loss of business and goodwill. Additionally, following the United Kingdom's withdrawal from the European Union, we will have to comply with the GDPR and the GDPR as implemented in the United Kingdom, each regime having the ability to fine up to the greater of €20 million/ £17.5 million, respectively, or 4% of global turnover. The relationship between the United Kingdom and the European Union in relation to certain aspects of data protection law remains subject to change, for example around how data can lawfully be transferred between each jurisdiction, which exposes us to further compliance risk.

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.

We are subject to certain U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations. We can face serious consequences for violations.

U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations, which we collectively refer to as Trade Laws, prohibit, among other things, companies and their employees, agents, clinical research organizations, legal counsel, accountants, consultants, contractors, and other partners from authorizing, promising, offering, providing, soliciting, or receiving directly or indirectly, corrupt or improper payments or anything else of value to or from recipients in the public or private sector. Exports of our products are further subject to export controls and sanctions laws and regulations imposed by the U.S. government and administered by the U.S. Departments of State, Commerce, and Treasury. U.S. export control laws may require a license or other authorization to export products to certain destinations and end users. In addition, U.S. economic sanctions laws include restrictions or prohibitions on engaging in any transactions or dealings, including receiving investment or financing from, or engaging in the sale or supply of products and services to, U.S. sanctioned countries, governments, persons and entities.

Violations of Trade Laws can result in substantial criminal fines and civil penalties, imprisonment, the loss of trade privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We also expect our non-U.S. activities to increase over time. We expect to rely on third parties for research, preclinical studies, and clinical trials and/or to obtain necessary permits, licenses, patent registrations, and other marketing approvals. We can be held liable for the corrupt or other illegal activities of our personnel, agents, or partners, even if we do not explicitly authorize or have prior knowledge of such activities. Any changes in Trade Laws could result in a decreased ability to export or sell our solutions to, existing or potential customers with international operations. Future changes in Trade Laws and enforcement could also result in increased compliance requirements and related costs which could materially adversely affect our business, results of operations, financial condition and/or cash flows.

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 Carmine Stengone, our President and Chief Executive Officer, Daniel Lorrain, Ph.D., our Chief Scientific Officer, Stephen Huhn, M.D., our Chief Medical Officer and Senior Vice President of Clinical Development, Peter Slover, our Chief Financial Officer, 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. Further, we do not maintain “key man” life insurance on our executive officers.

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 because of the limited number of individuals in our industry with the breadth of skills and experience required to develop, gain regulatory approval of and commercialize drug candidates successfully. 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 biotechnology and pharmaceutical 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 other companies or organizations and may have commitments that limit their availability. If we are unable to continue to attract and retain highly qualified personnel, our ability to develop and commercialize our drug 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 clinical 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.

Our business and operations could be materially and adversely affected in the event of system failures.

Despite the implementation of security measures, 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 and manmade disasters (including earthquakes or fires), terrorism, war, PHEs, and telecommunication and electrical failures. While we do not believe that we have experienced any such system failure, accident, or security breach to date, if such an event were to occur and cause interruptions in our or their operations, it could result in delays and/or material disruptions of our research and development programs. For example, the loss of preclinical or clinical trial data from ongoing, or planned trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we currently rely on third parties for the manufacture of our drug candidates and to conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business. To the extent that any disruption or security breach were to result in a loss of or damage to our data or applications, or inappropriate disclosure of personal, confidential or proprietary information, we could incur liability, and the development of our drug candidates could be delayed.

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

The U.S. federal and various state and foreign governments have enacted or proposed requirements regarding the collection, distribution, use, security and storage of personally identifiable information and other data. In the ordinary course of our business, we and third parties with which we have relationships will continue to collect and store sensitive data, including clinical trial data, proprietary business information, personal data and personally identifiable information of our clinical trial subjects and employees, in data centers and on networks. The secure processing, maintenance and transmission of this information is critical to our operations. Despite our and our collaborators' security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or internal bad actors, breaches due to employee error, technical vulnerabilities, malfeasance, or other disruptions. A number of proposed and enacted federal, state and international laws and regulations obligate companies to notify regulators and/or individuals of security breaches, which could result from breaches experienced by us or by third parties, including collaborators, vendors, contractors, or other organizations with which we have formed strategic relationships. Although, to our knowledge, neither we nor any such third parties have experienced any material security breach, and even though we may have contractual protections with such third parties, any such breach could compromise our or their networks and the information stored therein could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure, notifications, follow-up actions related to such a security breach or other loss of information could result in legal claims or proceedings, liability under laws including those that protect the privacy of personal information, and significant costs, including regulatory penalties, fines, and legal expenses, and such an event could disrupt our operations, cause us to incur remediation costs, damage our reputation, and cause a loss of confidence in us and our or such third parties' ability to conduct clinical trials, which could adversely affect our reputation, delay the clinical development of our drug candidates and materially and adversely affect our business.

Risks Related to Commercialization

We face significant competition from biotechnology, pharmaceutical, and medical device companies, and our operating results will suffer if we fail to compete effectively and in a timely manner.

The biotechnology, pharmaceutical, and medical device 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 a drug candidate we develop is approved, we will face intense competition from a variety of businesses, including large, fully integrated pharmaceutical companies, specialty pharmaceutical companies, biotechnology companies and early-stage companies, particularly if the early-stage company has a collaborative arrangement with a large and established company.

In addition, we face competition with respect to our current drug candidates and will face competition with respect to any other drug candidates that we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. There are a number of large pharmaceutical and biotechnology companies that currently market and sell products or are pursuing the development of drug candidates for the treatment of the indications that we are pursuing. Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization.

PIPE-791 for IPF

While there is no pharmacological cure for IPF, there are two FDA-approved therapies to treat the disease: pirfenidone (Esbriet, marketed by Genentech/Roche) and nintedanib (Ofev, marketed by

Boehringer Ingelheim). We are also aware of LPA1R targeted drug candidates in development for IPF by Bristol-Meyers Squibb, AbbVie Inc., Horizon Therapeutics plc, and Structure Therapeutics Inc. In addition, there are a number of companies developing drug candidates for IPF utilizing approaches with different mechanisms of action, including but not limited to Roche Holding AG, Boehringer Ingelheim, United Therapeutics Corporation, Pliant Therapeutics, RedX Pharma, and Endeavor Biomedicines.

PIPE-791 for Progressive MS

While there are a number of MS medications approved by the FDA for the “active” form of SPMS, no FDA-approved drugs carry a specific indication for Progressive MS. Mitoxantrone (Novantrone®, marketed by Serono) is approved for secondary (chronic) Progressive MS and ocrelizumab (Ocrevus®, marketed by Genentech/Roche) is approved for PPMS.

PIPE-307 for Depression

There are numerous approved therapies for depression, including antidepressant drugs such as selective serotonin reuptake inhibitors, serotonin and norepinephrine reuptake inhibitors, antipsychotics and mood stabilizers. A number of these approved therapies are offered as generics.

PIPE-307 for RRMS

We are aware of over 20 DMTs that suppress inflammatory injury and decrease the rate of annual relapses. However, to our knowledge, none of these approved therapies, including any generics, effectively promote remyelination to mitigate the progressive disability associated with chronic demyelination.

Many of the companies that we compete against or against which we may compete in the future 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. Mergers and acquisitions in the pharmaceutical, biotechnology and diagnostic industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or earlier stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These 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. In addition, we cannot predict whether our current competitive advantages, such as our ability to develop selective compounds targeting challenging molecular pathways, will remain in place in the future. If these or other barriers to entry do not remain in place, other companies may be able to more directly or effectively compete with us.

Further, competition could render any drug candidate we develop obsolete, less competitive, or uneconomical. Our competitors may, among other things:

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

- more effectively recruit and retain qualified scientific and management personnel;
- more effectively establish clinical trial sites and patient registration;
- better protect their patents and intellectual property or acquire technologies that are complementary to, or necessary for, our programs;
- implement more effective approaches to sales, marketing, pricing, coverage, and reimbursement; or
- form more advantageous strategic alliances or collaborations.

If we are not able to effectively compete for any of the foregoing reasons, our business, financial condition and results of operations will be materially harmed.

Even if PIPE-791 or PIPE-307 receives marketing approval in an indication, it may fail to achieve market acceptance by physicians, patients, third-party payors, or others in the medical community necessary for commercial success.

Even if PIPE-791 or PIPE-307 receives marketing approval for an indication, 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 royalties to become profitable. The degree of market acceptance of PIPE-791 or PIPE-307, if approved, will depend on several 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;
- the ability to offer a product 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 the product together with other medications.

Because we expect sales of PIPE-791 or PIPE-307, if approved, to generate substantially all our revenues for the foreseeable future, the failure of these drug candidates to find market acceptance would harm our business and could require us to seek additional financing.

We have no sales, marketing or distribution capabilities or experience. If we are unable to establish sales and marketing capabilities either on our own or in collaboration with third parties, we may not be successful in commercializing PIPE-791, even if approved.

We have no sales, marketing or distribution capabilities or experience. In order to market and successfully commercialize PIPE-791, even if approved, we must build our sales and marketing capabilities or enter into collaborations with third parties for these services. We currently have no sales, marketing or distribution capabilities and as a company have no experience in marketing products. We

currently intend to directly market and commercialize PIPE-791, if it is approved, in the United States by developing our own sales and marketing force. There are significant expenses and risks involved with establishing our own sales and marketing capabilities, including our ability to hire, train, retain, and appropriately incentivize a sufficient number of qualified individuals, generate sufficient sales leads and provide our sales and marketing team with adequate access to physicians who may prescribe our product, effectively manage a geographically dispersed sales and marketing team, and other unforeseen costs and expenses. Any failure or delay in developing PIPE-791 that affects the expected timing for its commercialization or results in its failure to be commercialized could result in us having prematurely or unnecessarily incurred costly commercialization expenses.

We may also enter into collaborations for the sales and marketing of PIPE-791, if approved, especially in jurisdictions outside the United States. To the extent that we depend on collaborators for sales and marketing activities, any revenues we receive will depend upon the success of those collaborators' sales and marketing teams and the collaborators' prioritization of our product and compliance with applicable regulatory requirements, and there can be no assurance that the collaborators' efforts will be successful.

If we are unable to build our own sales and marketing team or enter into collaborations for the commercialization of PIPE-791, if approved, we may be forced to delay the commercialization of PIPE-791 or reduce the scope of our sales or marketing activities, which would have an adverse effect on our business, results of operation and prospects.

The successful commercialization of PIPE-791 or PIPE-307 will depend in part on the extent to which governmental authorities and health insurers establish adequate coverage, reimbursement levels, and pricing policies for such drug candidates. Failure to obtain or maintain coverage and adequate reimbursement for PIPE-791 or PIPE-307, even if approved, could limit our or J&J's ability to market these products and decrease the revenue we generate or the royalties we receive.

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. The ability to achieve acceptable levels of coverage and reimbursement for PIPE-791 and PIPE-307, if approved, by governmental authorities, private health insurers and other organizations will influence our ability and J&J's ability, respectively to successfully commercialize these drug candidates. Obtaining adequate coverage and reimbursement for a drug candidate that is administered under the supervision of a physician, which is what we anticipate for both PIPE-791 and PIPE-307, may be particularly difficult because of the higher prices associated with such products. As a result, availability of coverage and reimbursement by payors is highly uncertain. A decision by a third-party payor not to cover or separately reimburse a product could reduce physician utilization of the product once approved. Assuming PIPE-791 and PIPE-307 obtain coverage by third-party payors, 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 PIPE-791 or PIPE-307, and any reimbursement that may become available may be decreased or eliminated in the future.

Third-party payors increasingly are challenging prices charged for pharmaceutical products and services, and Congress has introduced several proposals related to drug pricing, as discussed above. Many third-party payors may refuse to provide coverage and reimbursement for particular drugs or biologics when an equivalent generic drug, biosimilar, or a less expensive therapy is available. Even if PIPE-791 or PIPE-307 offer improved efficacy, pricing of existing drugs may limit the amount we and J&J, respectively, can charge for these products. 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 a satisfactory return on investment. If reimbursement is not available for PIPE-791 or PIPE-307, or is available only at limited levels, neither we nor J&J may be able to successfully commercialize these drug candidates. Additionally, revenues we ultimately receive from PIPE-791 or PIPE-307 will also depend on what, if any, proposals related to drug pricing may be implemented and, if implemented, when they might take effect.

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 PIPE-791 and PIPE-307.

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, and one third-party payor's decision to cover a product does not ensure that other payors will also provide similar coverage. Additionally, the process for determining whether a third-party payor will provide coverage for a product is typically separate from the process for setting the price of such product or establishing the reimbursement rate that the payor will pay for the product once coverage is approved. As a result, the determination of coverage and reimbursement is often a time-consuming and costly process that will require the seller to provide scientific and clinical support for the use of the drug 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.

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 to support the commercialization of PIPE-791 or PIPE-307. We expect that any commercialization of PIPE-791 and PIPE-307 will be subject to pricing pressures due to the trend toward managed healthcare, the increasing influence of health maintenance organizations, and additional legislative, administrative, or regulatory 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.

Any commercialization of PIPE-791 and PIPE-307 may also be subject to extensive governmental price controls and other market regulations outside of the United States. The increasing emphasis on cost-containment initiatives in other countries have and, we believe, 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 or J&J are able to charge for PIPE-791 and PIPE-307, respectively. Accordingly, in markets outside the United States, the reimbursement for PIPE-791 and PIPE-307 may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

The insurance coverage and reimbursement status of newly-approved products is uncertain. Failure to obtain or maintain adequate coverage and reimbursement for an approved products could limit the ability to market the product and decrease the revenues we ultimately receive.

The pricing, coverage and reimbursement for PIPE-791, if approved, must be adequate to support the commercial infrastructure required to market and sell PIPE-791. Our per-patient prices must be sufficient to recover our development and manufacturing costs and potentially achieve profitability. However, sales of any pharmaceutical product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance and managed healthcare organizations, and the level of reimbursement for such product by third-party payors. Significant uncertainty exists as to the coverage and reimbursement status of any newly approved product. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. One third-party payor's decision to cover a product does not ensure that other payors will also provide coverage for the product. As a result, we have no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. For products administered under the supervision of a physician in a physician office setting, obtaining coverage and adequate reimbursement may be particularly difficult because of the higher prices often associated with such drugs. Additionally, we may not be guaranteed separate reimbursement for the product itself or the treatment or procedure in which the product is used, which may impact physician utilization.

In addition, third-party payors are increasingly reducing reimbursements for pharmaceutical products such as ours. The U.S. government and state legislatures have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement, and requirements for substitution of generic products. Third-party payors are increasingly challenging the prices charged, examining the medical necessity, and reviewing the cost effectiveness of pharmaceutical products, in addition to questioning their safety and efficacy. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit or delay sales of any of our future products. Decreases in third-party reimbursement or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for any of our future products.

In international markets, reimbursement and healthcare payment are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in the European Union, Canada and other countries has and will continue to put pressure on the pricing and usage of our drug candidates. In many countries, the prices of medicinal products are subject to varying price control mechanisms as part of national health systems. In general, the prices of medical devices under such systems are substantially lower than in the U.S. 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. Furthermore, there is no assurance that a product will be considered medically reasonable and necessary for a specific indication, will be considered cost-effective by third-party payors, that an adequate level of reimbursement will be established even if coverage is available, or that the third-party payors' reimbursement policies will not adversely affect the ability of manufacturers to sell products profitably. Accordingly, in markets outside the U.S., the reimbursement for our products may be reduced compared with the U.S. and may be insufficient to generate commercially reasonable revenue and profits.

If we fail to comply with our reporting and payment obligations under the Medicaid Drug Rebate program or other governmental pricing programs, if we participate in these programs, we could be subject to additional rebate requirements, penalties, or other sanctions, which could have a material adverse effect on our business, financial condition, results of operations, and growth prospects.

Under the Medicaid Drug Rebate program, a participating manufacturer is required to pay a rebate to each state Medicaid program for its covered outpatient drugs that are dispensed to Medicaid beneficiaries and paid for by the state Medicaid program as a condition of having federal funds being made available for our drugs under Medicaid and Medicare Part B. Those rebates are based on pricing data reported by the manufacturer on a monthly and quarterly basis to CMS, the federal agency that administers the Medicaid Drug Rebate program. If we fail to pay the required rebate amount or report pricing data on a timely basis, we may be subject to civil monetary penalties and/or termination from the Medicaid Drug Rebate program. Additionally, civil monetary penalties can be applied if we are found to have knowingly submitted any false pricing or product information to the government, if we fail to submit the required pricing data on a timely basis, or if we misclassify or misreport product information. CMS could also decide to terminate our Medicaid drug rebate agreement, in which case federal payments may not be available under Medicaid or Medicare Part B for our covered outpatient drugs.

Federal law requires that a manufacturer also participate in the 340B Drug Pricing program in order for federal funds to be available for the manufacturer's drugs under Medicaid and Medicare Part B. The 340B program requires participating manufacturers to agree to charge no more than the 340B "ceiling price" for the manufacturer's covered outpatient drugs to specified "covered entities," including community health centers and other entities that receive certain federal grants, as well as certain hospitals that serve a disproportionate share of low-income patients. The 340B ceiling price is calculated based on the information reported under the Medicaid Drug Rebate program. If we are found to have knowingly and intentionally charged 340B covered entities more than the statutorily mandated ceiling price, we could be subject to significant civil monetary penalties and/or such failure also could be grounds for the Health Resources and Services Administration to terminate our agreement to participate in the 340B program, in which case our covered outpatient drugs would no longer be eligible for federal payment under the Medicaid or Medicare Part B program.

Federal law also requires that manufacturers report to CMS, on a quarterly basis, average sales price information for certain categories of drugs that are paid under the Medicare Part B program. Manufacturers calculate average sales price based on a statutorily defined formula as well as regulations and guidance. CMS uses the reported information to determine payment rates for drugs under Medicare Part B. If we are found to have made a misrepresentation in the reporting of our average sales price, we may be subject to civil monetary penalties. In addition, if we fail to provide timely information or knowingly provide false information, then we may also be subject to significant civil monetary penalties.

In addition, starting in 2023, manufacturers must pay refunds to Medicare for single source drugs or biologicals, or biosimilar biological products, reimbursed under Medicare Part B and packaged in single-dose containers or single-use packages for units of discarded drug reimbursed by Medicare Part B in excess of 10 percent of total allowed charges under Medicare Part B for that drug. A failure to pay refunds for discarded drugs under the discarded drug refund program could be subject us to civil monetary penalties of 125 percent of the refund amount.

Pricing and rebate calculations are complex, vary across products and programs, and are often subject to interpretation by the manufacturer, governmental agencies, and courts. A manufacturer that becomes aware that its Medicaid reporting for a prior quarter was incorrect, or has changed as a result of recalculation of the pricing data, is obligated to resubmit corrected data up to three years after those

data originally were due. Restatements and recalculations increase the costs for complying with the laws and policies governing the Medicaid Drug Rebate program and could result in an overage or underage in our rebate liability for past quarters. They also may affect the 340B ceiling price and therefore liability under the 340B program.

In order to be eligible to have its products paid for with federal funds under the Medicaid and Medicare Part B programs and purchased by the Department of Veterans Affairs (VA), Department of Defense (DoD), Public Health Service, and Coast Guard (the Big Four agencies), and certain federal grantees, a manufacturer is required to participate in the VA Federal Supply Schedule (FSS) pricing program, established under Section 603 of the Veterans Health Care Act of 1992. Under this program, the manufacturer is obligated to make its covered drugs available for procurement on an FSS contract and charge a price to the Big Four agencies that is no higher than the Federal Ceiling Price (FCP), which is a price calculated pursuant to a statutory formula. The FCP is derived from a calculated price point called the “non-federal average manufacturer price” (the Non FAMP), which the manufacturer calculates and reports to the VA on a quarterly and annual basis. Pursuant to applicable law, knowing provision of false information in connection with a Non FAMP filing can subject a manufacturer to significant penalties for each item of false information. The FSS contract also contains extensive disclosure and certification requirements.

Under Section 703 of the National Defense Authorization Act for FY 2008, the manufacturer is required to pay quarterly rebates to DoD on utilization of its innovator products that are dispensed through DoD’s Tricare network pharmacies to Tricare beneficiaries. The rebates are calculated as the difference between the annual Non FAMP and FCP for the calendar year that the product was dispensed. A manufacturer that overcharges the government in connection with the FSS contract or Tricare Retail Pharmacy Rebate Program, whether due to a misstated FCP or otherwise, is required to refund the difference to the government. Failure to make necessary disclosures and/or to identify contract overcharges can result in allegations against us under the FCA and other laws and regulations.

Additional U.S. federal healthcare reform measures may be implemented 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 drug candidates or additional pricing pressures.

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

Our business strategy includes potentially expanding internationally if PIPE-791 receives regulatory approval. Doing business internationally involves several risks, including, but not limited to:

- multiple, conflicting, and changing laws and regulations, such as privacy regulations, tax laws, export and import restrictions, economic sanctions laws and regulations, employment laws, regulatory requirements, and other governmental approvals, permits, and licenses;
- failure by us to obtain and maintain regulatory approvals for the use of PIPE-791 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, PHEs, 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 FCPA, its books and records provisions, or its anti-bribery provisions, as well as other applicable laws and regulations prohibiting bribery and corruption.

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

Risks Related to this Offering and our Class A Common Stock

No active trading market for our Class A common stock currently exists, and an active trading market may not develop and, as a result, it may be difficult for you to sell your shares of our Class A common stock.

Prior to this offering, there has not been an active trading market for our Class A common stock. The lack of an active trading market for our Class A common stock may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable, reduce the market value of your shares, impair our ability to raise capital, and impair our ability to attract, motivate and retain our employees through equity incentive awards. The initial public offering price of our Class A common stock was determined by negotiations between us and the underwriters and may not be indicative of the market price of our Class A common stock after this offering. Consequently, you may not be able to sell your Class A common stock at or above the initial public offering price, and may lose a portion or all of your investment.

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

The market price of our Class A common stock is likely to be highly volatile and may be subject to wide fluctuations in response to various factors, some of which are beyond our control. In addition to the factors discussed in this section titled “Risk factors”, these factors include:

- any delay in the enrollment or ultimate completion of our existing and planned clinical trials for PIPE-791 and our existing clinical trial for PIPE-307;
- the results of our existing and planned clinical trials for PIPE-791 and our existing clinical trial for PIPE-307;
- any delay by J&J in initiating or completing clinical trials for PIPE-307, the results from any clinical trial completed by J&J for PIPE-307 or any decision by J&J not to pursue further clinical development of PIPE-307;
- the results of the clinical trials conducted by competitors developing drug candidates competitive with PIPE-791 or PIPE-307;
- our ability to develop additional drug candidates based on our clinical translational approach;

- any delay in submitting a regulatory filing for PIPE-791 or PIPE-307, and any adverse development or perceived adverse development with respect to the regulatory review of such filing;
- our failure to successfully develop and commercialize PIPE-791 and/or any future drug candidate we develop, and J&J's failure to successfully develop and commercialize PIPE-307;
- inability to obtain additional funding to support our product development plans and operations;
- regulatory or legal developments in the United States and other countries applicable to any drug candidate;
- adverse regulatory decisions;
- changes in the structure of healthcare payment systems;
- adverse developments concerning our CMOs or CROs;
- inability to obtain adequate product supply to support our clinical trials, or the inability to do so at acceptable prices;
- introduction of new products, services or technologies by our competitors;
- our ability to effectively manage our growth;
- failure to meet or exceed financial projections we provide to the public;
- failure to meet or exceed the estimates and projections of the investment community;
- changes in the market valuations of companies similar to us;
- market conditions in the biotechnology and pharmaceutical sectors, and the issuance of new or changed securities analysts' reports or recommendations;
- announcements of significant in-licensing transactions, acquisitions, strategic collaborations, joint ventures or capital commitments by us or our competitors;
- our inability to establish additional collaboration or licensing arrangements that we need on favorable terms, or at all;
- significant lawsuits, including patent or stockholder litigation, and disputes or other developments relating to our proprietary rights, including patents, litigation matters, and our ability to obtain patent protection for our drug candidates;
- additions or departures of key scientific or management personnel;
- sales of our common stock by us or our stockholders in the future;
- trading volume of our common stock; and
- general economic, industry and market conditions.

In addition, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry factors, as well as general economic, political, regulatory, and market conditions, may negatively affect the market price of our common stock, regardless of our actual operating performance.

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

We cannot specify with any certainty the particular uses of the net proceeds that we will receive from this offering, but we currently expect to use the net proceeds from this offering (i) to complete our

existing and planned clinical trials for our lead drug candidate, PIPE-791, and our existing clinical trial for PIPE-307, (ii) to fund further research and development activities, including the development of CTX-343, a peripherally-restricted LPA1R antagonist, and (iii) for working capital and general corporate purposes. We will have broad discretion in the application of the net proceeds from this offering, including working capital and other general corporate purposes, and you and other stockholders may disagree with how we spend or invest these proceeds. The failure by our management to apply these funds effectively could adversely affect our business and financial condition. Pending their use, we may invest the net proceeds from our initial public offering in a manner that does not produce income or that loses value. These investments may not yield a favorable return to our investors.

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

If you purchase shares of our Class A common stock in this offering, you will experience substantial and immediate dilution in the pro forma net tangible book value per share of $7.07 per share as of December 31, 2023, based on the initial public offering price of our Class A common stock of $16.00 per share, because the price that you pay will be substantially greater than the pro forma net tangible book value per share of the Class A common stock that you acquire. This dilution is due in large part to the fact that our earlier investors paid substantially less than the initial public offering price when they purchased their shares of our capital stock. You will experience additional dilution upon exercise of options to purchase Class A common stock under our equity incentive plans, upon vesting of options to purchase common stock under our equity incentive plans, if we issue restricted stock to our employees under our equity incentive plans or if we otherwise issue additional shares of our Class A common stock.

Substantial amounts of our outstanding shares may be sold into the market when lock-up periods end. If there are substantial sales of shares of our Class A common stock, the price of our common stock could decline.

The price of our Class A common stock could decline if there are substantial sales of our Class A common stock, particularly sales by our directors, executive officers and significant stockholders, or if there is a large number of shares of our Class A common stock available for sale and the market perceives that sales will occur. After this offering, we will have 23,397,452 (or 24,428,702 shares if the underwriters exercise their option to purchase additional shares in full) outstanding shares of our Class A common stock and 1,733,338 shares of our Class B common stock based on the number of shares outstanding as of December 31, 2023. All of the shares of Class A common stock sold in this offering will be available for sale in the public market, unless purchased by our affiliates or existing stockholders. Substantially all of our outstanding shares of common stock are currently restricted from resale as a result of market-standoff agreements and lock-up agreements, which restrictions may be waived by Goldman Sachs & Co. LLC and Morgan Stanley, with or without notice as more fully described in the section titled “Underwriting.” These shares will become available to be sold 181 days after the date of this prospectus; provided that shares held by directors, executive officers and other affiliates will be subject to volume limitations under Rule 144 under the Securities Act of 1933, as amended (Securities Act), and various vesting agreements. In addition, shares of Class A common stock that are either subject to outstanding options under our 2012 Plan and/or reserved for future issuance under the 2024 Plan and/or the 2024 ESPP, will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements and Rule 144 and Rule 701 under the Securities Act. If these additional shares of Class A common stock are sold, or if it is perceived that they will be sold, in the public market, the trading price of our Series A common stock could decline.

After this offering, certain of our stockholders will have rights, subject to some conditions, to require us to file registration statements covering up to 15,906,236 of their shares or to include their

shares in registration statements that we may file for ourselves or our stockholders, subject to lock-up agreements. We also intend to register shares of Class A common stock that we have issued and may issue under our employee equity incentive plans. Once we register these shares, they will be able to be sold freely in the public market upon issuance, subject to existing market standoff or lock-up agreements.

The market price of the shares of our Class A common stock could decline as a result of the sale of a substantial number of our shares of Class A common stock in the public market or the perception in the market that the holders of a large number of shares intend to sell their shares.

After this offering, our directors, executive officers and principal stockholders will continue to own a significant percentage of our common stock and, if they choose to act together, will be able to exert significant influence over matters subject to stockholder approval.

Following this offering, our directors, executive officers, and principal stockholders will continue to exert significant influence on us. Upon the closing of this offering, these holders will beneficially own approximately 40.6% of the voting power of our outstanding common stock, or approximately 38.8% if the underwriters exercise their option to purchase additional shares in full, based on the number of shares outstanding as of December 31, 2023. As a result, these holders, acting together, will have significant control over all matters that require approval of our stockholders, including the election of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transactions. The interests of these holders may not always coincide with our corporate interests or the interests of other stockholders, and they may act in a manner with which you may not agree or that may not be in the best interests of our other stockholders. In addition, participation in this offering by our existing stockholders and/or their affiliated entities may reduce the public float for our Class A common stock, which could reduce the number of shares that are available to be traded at any given time, thereby adversely impacting the liquidity of our Class A common stock and depressing the price at which you may be able to sell shares of Class A common stock purchased in this offering.

The dual series structure of our common stock may limit your ability to influence corporate matters and may limit your visibility with respect to certain transactions.

The dual class structure of our common stock may limit your ability to influence corporate matters. Holders of our Class A common stock are entitled to one vote per share, while holders of our Class B common stock are not entitled to any votes. Nonetheless, each share of our Class B common stock may be converted at any time into one share of our Class A common stock at the option of its holder by providing written notice to us, subject to the limitations provided for in our amended and restated certificate of incorporation to become effective upon the closing of this offering. Consequently, if holders of our Class B common stock following this offering exercise their option to make this conversion, this will have the effect of increasing the relative voting power of those prior holders of our Class B common stock, and correspondingly decreasing the voting power of the holders of our Class A common stock, which may limit your ability to influence corporate matters. Additionally, stockholders who hold, in the aggregate, more than 10% of our Class A common stock and Class B common stock, but 10% or less of our Class A common stock, and are not otherwise an insider, may not be required to report changes in their ownership due to transactions in our Class B common stock pursuant to Section 16(a) of the Exchange Act, and may not be subject to the short-swing profit provisions of Section 16(b) of the Exchange Act.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our results of operation could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (U.S. GAAP) requires management to make estimates and assumptions that affect the

amounts reported in our financial statements and accompanying notes. We base our estimates on historical experience and estimates and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. For example, in connection with the implementation of the new revenue accounting standard if and when we have product sales, management makes judgments and assumptions based on our interpretation of the new standard. The new revenue standard is principle-based and interpretation of those principles may vary from company to company based on their unique circumstances. It is possible that interpretation, industry practice and guidance may evolve as we apply the new standard. If our assumptions underlying our estimates and judgements relating to our critical accounting policies change or if actual circumstances differ from our assumptions, estimates or judgements, our operating results may be adversely affected and could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

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

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

- the option to present only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes Oxley Act;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements; and
- not being required to disclose certain executive compensation-related items such as the correlation between executive compensation and performance and comparisons of the chief executive officer's compensation to median employee compensation.

In addition, Section 107 of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies. We have elected to avail ourselves of this exemption and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for private companies.

We may take advantage of these reporting exemptions until we are no longer an emerging growth company. 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 $1.235 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 30th and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Even after we no longer qualify as an emerging growth company, we may continue to qualify as a "smaller reporting company," which would allow us to take advantage of many of the same exemptions

from disclosure requirements including reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements, if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue is less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million.

We cannot predict if investors will find our common stock less attractive because we will 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 stock price may be more volatile.

We do not intend to pay cash dividends for the foreseeable future. Consequently, you must rely on sales of our Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on your investment.

We have never declared nor paid cash dividends on our capital stock. We currently intend to retain any future earnings to finance the operation and expansion of our business, and we do not expect to declare or pay any dividends in the foreseeable future. Consequently, stockholders must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investment.

Delaware law and provisions in our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect at the completion of this offering could make a merger, tender offer or proxy contest difficult, thereby depressing the trading price of our Class A common stock.

Following the completion of this offering, our status as a Delaware corporation and the anti-takeover provisions of the Delaware General Corporation Law may discourage, delay or prevent a change in control by prohibiting us from engaging in a business combination with an interested stockholder for a period of three years after the person becomes an interested stockholder, even if a change of control would be beneficial to our existing stockholders. In addition, our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect at the completion of this offering will contain provisions that may make the acquisition of our company more difficult, including the following:

- a classified board of directors with three-year staggered terms, which could delay the ability of stockholders to change the membership of a majority of our board of directors;
- the ability of our board of directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by a majority vote of our entire board of directors, the chair of our board of directors or our chief executive officer, which could delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- the requirement for the affirmative vote of holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of the voting stock, voting together as a single class, to amend

the provisions of our amended and restated certificate of incorporation or our amended and restated bylaws, which may inhibit the ability of an acquirer to effect such amendments to facilitate an unsolicited takeover attempt; and

- advance notice procedures with which stockholders must comply to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time. While a Delaware corporation may opt out of this provision by express provision in its original certificate of incorporation or by amendment to its certificate of incorporation or bylaws approved by its stockholders, we have not opted out of this provision.

These and other provisions in our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law could make it more difficult for stockholders or potential acquirers to obtain control of our board of directors or initiate actions that are opposed by our then-current board of directors, including delay or impede a merger, tender offer or proxy contest involving our company. The existence of these provisions could negatively affect the price of our common stock and limit opportunities for you to realize value in a corporate transaction.

For information regarding these and other provisions, see the section titled "Description of Capital Stock."

Our amended and restated certificate of incorporation, which will be in effect at the completion of this offering, will provide that the Court of Chancery of the State of Delaware and the U.S. federal district courts are the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation, which will be in effect at the completion of this offering, will provide that the Court of Chancery of the State of Delaware is the exclusive forum 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, unless we consent in writing to the selection of an alternative forum to the extent permitted by law.

This provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. Our certificate of incorporation will further provide that the U.S. federal district courts will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, including all causes of action asserted against any defendant named in such complaint. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of our certificate of incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees and may result in stockholders incurring additional expenses in bringing a claim in the forum designated by us, which may discourage these types of lawsuits. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions.

General Risk Factors

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports published by securities or industry analysts about our business and the drug candidates we have developed. Securities and industry analysts do not currently, and may never, publish research on our company. If no or only very few securities analysts commence coverage of us, or if industry analysts cease coverage of us, the trading price for our common stock would be negatively affected. If one or more of the analysts who cover us downgrade our common stock or publish inaccurate or unfavorable research about our business or the drug candidates we have developed, our common stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our common stock price and trading volume to decline.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because development stage pharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

Requirements associated with being a public company will increase our costs significantly, as well as divert significant company resources and management attention.

After the completion of this offering, we will be subject to the reporting requirements of the Exchange Act and the other rules and regulations of the SEC and Nasdaq related to public companies. Compliance with the various reporting and other requirements applicable to public companies requires considerable time and attention of management and we will incur significant legal, accounting and other expenses that we did not incur as a private company. We cannot assure you that we will satisfy our obligations as a public company on a timely basis.

In addition, as a public company, it may be more difficult or more costly for us to obtain certain types of insurance, including directors' and officers' liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified personnel to serve on our board of directors, our board committees or as executive officers.

If we fail to maintain proper and effective internal controls, our ability to produce accurate and timely financial statements could be impaired, which could result in sanctions or other penalties that could harm our business. As a result of becoming a public company, we will be obligated to develop and maintain proper and effective internal controls over financial reporting and any failure to maintain the adequacy of these internal controls may adversely affect investor confidence in us, and, as a result, the value of our common stock.

To comply with the requirements of being a public company, we will need to undertake various actions, including implementing new internal controls and procedures and hiring additional accounting

or internal audit staff. The Sarbanes-Oxley Act requires that we maintain effective disclosure controls and procedures and internal control over financial reporting. However, while we remain a smaller reporting company, we will not be required to include an attestation report on internal control over financial reporting issued by our independently registered public accounting firm. We are continuing to develop and refine our disclosure controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we file with the SEC is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that information required to be disclosed in reports under the Exchange Act, is accumulated and communicated to our principal executive and financial officers. Our current controls and any new controls that we develop may become inadequate and weaknesses in our internal control over financial reporting may be discovered in the future. Any failure to develop or maintain effective controls when we become subject to this requirement could negatively affect the results of periodic management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting that we may be required to include in our periodic reports we will file with the SEC under Section 404 of the Sarbanes-Oxley Act, harm our operating results, cause us to fail to meet our reporting obligations or result in a restatement of our prior period financial statements. In the event that we are not able to demonstrate compliance with the Sarbanes-Oxley Act, that our internal control over financial reporting is perceived as inadequate or that we are unable to produce timely or accurate financial statements, investors may lose confidence in our operating results and the price of our common stock could decline. In addition, if we are unable to continue to meet these requirements, we may be unable to remain listed on Nasdaq.

Our independent registered public accounting firm will not be required to formally attest to the effectiveness of our internal control over financial reporting until the later of (i) our second annual report or (ii) the first annual report required to be filed with the SEC following the date we are no longer an “emerging growth company,” as defined in the JOBS Act, or a “smaller reporting company” as defined by the SEC.

We may discover weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. In addition, our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls over financial reporting, we may not be able to produce timely and accurate financial statements. If that were to happen, our investors could lose confidence in our reported financial information, the market price of our stock could decline and we could be subject to sanctions or investigations by the SEC or other regulatory authorities including equivalent foreign authorities.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

We have incurred substantial losses during our history, and we expect to continue to incur substantial loses in future years as we conduct clinical trials for PIPE-791 and complete the clinical trial for PIPE-307, and we may never achieve profitability.
Changes in tax laws or regulations may adversely impact our ability to utilize all, or any, of our net operating loss carryforwards (NOLs). For example, legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act (TCJA) significantly revised the Internal Revenue Code of 1986, as amended (the Code). Future guidance from the IRS and other tax authorities with respect to the TCJA may affect us, and certain aspects of the TCJA could

be repealed or modified in future legislation. For example, the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) modified certain provisions of the TCJA. Under the TCJA, as modified by the CARES Act, unused losses generated in taxable years ending after December 31, 2017 will not expire and may be carried forward indefinitely, but the deductibility of such NOLs in tax years beginning after December 31, 2020, is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to the TCJA or the CARES Act.

Under Sections 382 and 383 of the Code if a corporation undergoes an "ownership change," generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a three-year period, the corporation's ability to use its pre-change NOLs and other pre-change tax attributes (such as research tax credits) to offset its post-change income or taxes may be limited. Similar provisions of state tax law may also apply to limit our use of accumulated state tax attributes. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. We have completed an ownership analysis and identified that ownership changes occurred in July 2012, April 2018, March 2019 and February 2021. As a result of limitations arising from the prior ownership changes, federal and California net operating loss carry-forwards and federal R&D tax credits were removed from our inventory of deferred tax assets. As of December 31, 2023, we had federal and California tax loss carry forwards of approximately $37.3 million and $81.4 million, respectively. Out of the total federal net operating losses, approximately $37.3 million were generated after December 31, 2017, and therefore do not expire. The remaining federal and state net operating loss carry forwards begin to expire in 2035 and 2036, respectively, if unused. We may experience an ownership change in connection with this offering or in the future because of subsequent shifts in our stock ownership (some of which our outside of our control). If further requisite ownership changes occur, the amount of remaining tax attribute carryforwards available to offset taxable income and reduce income tax expense in future years may be further restricted or eliminated. As a result, even if we attain profitability, we may be unable to use a material portion of our NOLs and other tax attributes based on restrictions in the Code, which could adversely affect our future cash flows and results of operations.

Changes in tax laws and the implementation of tax laws could adversely affect us.

The tax regimes we are subject to or operate under, including with respect to income and non-income taxes, are unsettled and may be subject to significant change. Changes in tax laws, regulations, or rulings, or changes in interpretations of existing laws and regulations, could materially adversely affect our company. For example, the TCJA, the CARES Act, and the IRA enacted many significant changes to the U.S. tax laws. Future guidance from the IRS and other tax authorities with respect to such legislation may affect us, and certain aspects thereof could be repealed or modified in future legislation.

We use our best judgment in attempting to quantify and reserve for these tax obligations. However, a challenge by the IRS or another taxing authority, our ability to utilize tax benefits such as carryforwards or tax credits, or a deviation from other tax-related assumptions could have a material adverse effect on our business, results of operations or financial condition. In addition, new legislation or regulations which could affect our tax burden could be enacted by Congress or another governmental authority. We cannot predict the timing or extent of such tax-related developments which could have a negative impact on our financial position and results of operation.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial position, future revenue, business strategy, prospects, products, planned preclinical studies and clinical trials, results of clinical trials, research and development costs, regulatory approvals, timing and likelihood of success, as well as plans and objectives of management for future operations, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that are in some cases beyond our control and may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

The words “anticipate,” “believe,” “contemplate,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “might,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “will,” or “would” or the negative of these terms or other similar expressions are intended to identify forward looking statements. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- the likelihood of our clinical trials demonstrating the safety and efficacy of our drug candidates;
- the timing and progress of our current clinical trials, the expected results of these clinical trials and the timing of initiation of our future clinical trials;
- our plans relating to the clinical development of our current and future drug candidates, including the size, number and disease areas to be evaluated;
- J&J’s plans related to the clinical development of PIPE-307;
- our clinical translational approach, and our ability to identify and develop drug candidates that can potentially treat NI&I diseases by targeting biological pathways associated with specific clinical impairment to alter the course of disease;
- the size of the market opportunities for our drug candidates;
- the rate and degree of market acceptance and clinical utility of our drug candidates;
- our plans relating to commercializing our drug candidates, if approved;
- the success of competing therapies and technologies that are or may become available;
- the beneficial characteristics, safety, efficacy, therapeutic effects and potential advantages of our drug candidates;
- the timing or likelihood of regulatory filings and approval for our drug candidates;
- our ability to obtain and maintain regulatory approval of our drug candidates and our drug candidates to meet existing or future regulatory standards;
- our plans relating to the further development and manufacturing of our drug candidates, including additional indications for which we may pursue;
- our ability to successfully identify and complete transactions to in-license or otherwise acquire additional drug candidates, technologies, products or businesses;
- our ability to attract and to enter into commercial arrangements with third parties who have development, regulatory, manufacturing and commercialization expertise;
- our plans and ability to obtain or protect intellectual property rights, including extensions of existing patent terms where available, as well as our ability to secure and maintain intellectual property regulatory rights and regulatory protections;

- our ability to retain our senior management;
- the need to hire additional personnel and our ability to attract and retain such personnel;
- the accuracy of our estimates regarding expenses, capital requirements and needs for additional financing;
- the sufficiency of our existing capital resources to fund our future operating expenses and capital expenditure requirements;
- the period during which we expect we will qualify as an emerging growth company under the JOBS Act or a smaller reporting company; and
- our anticipated use of our existing cash, cash equivalents and short-term investments and the proceeds from this offering.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in the section titled “Risk Factors” elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, advancements, discoveries, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, except as required by law, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations.

You should read this prospectus and the documents that we reference in this prospectus and have filed with the SEC as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

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

MARKET, INDUSTRY AND OTHER DATA

This prospectus contains estimates, projections and other information concerning our industry, our business and the markets for our drug candidates, including data regarding the estimated size of such markets and the incidence of certain medical conditions. We obtained the industry, market and similar data set forth in this prospectus from our internal estimates and research, including surveys and studies we have sponsored and/or conducted, and from published studies from third parties, including governmental agencies. Our estimates of the potential market opportunities for our drug candidates include a number of key assumptions based on our industry knowledge, industry publications and third-party research, surveys and studies, which may fail to accurately reflect market opportunities. Information based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Unless otherwise expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by us and third parties, industry, medical and general publications, government data and similar sources.

The content of these third-party sources, except to the extent specifically set forth in this prospectus, does not constitute a portion of this prospectus and is not incorporated herein.

Certain monetary amounts, percentages, and other figures included elsewhere in this prospectus have been subject to rounding adjustments. Accordingly, figures shown as totals in certain tables or charts may not be the arithmetic aggregation of the figures that precede them, and figures expressed as percentages in the text may not total 100 percent or, as applicable, when aggregated may not be the arithmetic aggregation of the percentages that precede them.

USE OF PROCEEDS

We estimate that the net proceeds from this offering will be approximately $99.8 million, or $115.2 million if the underwriters exercise their option to purchase additional shares in full, after deducting underwriting discounts and estimated offering expenses payable by us.

The principal purposes of this offering are to increase our financial flexibility and create a public market for our common stock. We intend to use the net proceeds of this offering, together with our existing cash, cash equivalents and marketable securities, as follows:

- approximately $66.0 million to advance the development of our LPA1R antagonist program, including the completion of our Phase 1b PET imaging trial and Phase 2 clinical trials for our lead drug candidate, PIPE-791, in IPF and Progressive MS;
- approximately $16.2 million to complete our Phase 2 clinical trial of PIPE-307 for the potential treatment of RRMS; and
- the remaining proceeds to fund other research and development activities, including the development of our peripherally-restricted LPA1R antagonist drug candidate, CTX-343, and general corporate purposes, which we expect will include the hiring of additional personnel, capital expenditures and the costs of operating as a public company.

Based on our current operating plan, we believe that our existing cash, cash equivalents, and marketable securities as of the date of this prospectus, together with the estimated net proceeds from this offering, will be sufficient to fund our projected operations through at least the end of 2027. This estimate assumes that we do not receive any additional payments under our collaboration with J&J for the development of PIPE-307, and assumes that we do not opt in to fund a portion of all Phase 3 development costs for PIPE-307 in any indication.

We may also use a portion of the net proceeds from this offering to acquire, in-license or invest in products, technologies or businesses that complement our business. However, we do not have binding agreements or commitments for any acquisitions or investments at this time.

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 completion of this offering or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual expenditures and the extent of our preclinical, clinical and future development activities may vary significantly depending on numerous factors, including the progress of our development efforts, the status of and results from our ongoing and planned clinical trials, the timing and costs associated with the manufacture and supply of products for clinical development or commercialization and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

The expected net proceeds of this offering will not be sufficient for us to fund any of our products through regulatory approval, and we will need to raise substantial additional capital to complete the development and commercialization of our products.

Pending our use of the net proceeds from this offering, we plan to invest the net proceeds in a variety of capital preservation investments, including short-term interest-bearing investment-grade securities, certificates of deposit or government securities.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock and we do not currently intend to pay any cash dividends on our capital stock for the foreseeable future. We currently intend to retain all available funds and any future earnings to support operations and to finance the growth and development of our business. Any future determination to declare and pay dividends will be made at the discretion of our board of directors subject to applicable laws and will depend upon, among other factors, our results of operations, financial condition, business prospects, contractual restrictions, capital requirements and other factors our board of directors may deem relevant. Our future ability to pay cash dividends on our capital stock may also be limited by the terms of any future debt or preferred securities or any future credit facility.

CAPITALIZATION

The following table sets forth our cash, cash equivalents, and marketable securities and total capitalization as of December 31, 2023, as follows:

- on an actual basis;
- on a pro forma basis to reflect: (i) the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 15,906,236 shares of our common stock, consisting of 14,172,898 shares of our Class A common stock and 1,733,338 shares of Class B common stock; and (ii) the filing and effectiveness of our amended and restated certificate of incorporation, each of which will occur immediately prior to the completion of this offering; and
- on a pro forma as adjusted basis to give effect to: (i) the pro forma adjustments set forth above; and (ii) the sale and issuance of 6,875,000 shares of our Class A common stock by us in this offering, based upon the receipt by us of the estimated net proceeds from this offering at the initial public offering price of $16.00 per share, and after deducting the underwriting discounts and estimated offering expenses payable by us.

This information should be read in conjunction with our financial statements and the related notes appearing elsewhere in this prospectus, as well as the section of this prospectus titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

	As of December 31, 2023		
	Actual	Pro Forma	Pro Forma As Adjusted
		(unaudited)	
		(in thousands, except share and per share data)	
Cash, cash equivalents, and marketable securities	$ 125,190	$ 125,190	$ 225,375
Series A convertible preferred stock, $0.001 par value per share; 1,786,607 shares authorized, 1,786,604 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	$ 11,778	$ —	$ —
Series A-1 convertible preferred stock, $0.001 par value per share; 1,429,286 shares authorized, 1,423,119 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	9,382	—	—
Series B convertible preferred stock, $0.001 par value per share; 3,362,377 shares authorized, 3,346,607 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	31,595	—	—
Series C convertible preferred stock, $0.001 par value per share; 10,362,324 shares authorized, 9,349,906 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	139,865	—	—
Stockholders’ (deficit) equity:			
Preferred stock, $0.001 par value per share; no shares authorized, issued and outstanding, actual; 10,000,000 shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	—

	As of December 31, 2023		
	Actual	Pro Forma (unaudited)	Pro Forma As Adjusted
	(in thousands, except share and per share data)		
Class A common stock, $0.001 par value per share; 22,689,916 shares authorized, 2,349,554 shares issued and outstanding, actual; 200,000,000 shares authorized, 16,522,452 shares issued and outstanding, pro forma; 200,000,000 shares authorized, 23,397,452 shares issued and outstanding, pro forma as adjusted	2	16	23
Class B common stock, $0.001 par value per share; 16,940,595 shares authorized, no shares issued and outstanding, actual; 20,000,000 shares authorized, 1,733,338 shares issued and outstanding, pro forma; 20,000,000 shares authorized, 1,733,338 shares issued and outstanding, pro forma as adjusted	—	2	2
Additional paid-in capital	7,098	199,702	299,505
Accumulated deficit	(75,144)	(75,144)	(75,144)
Accumulated other comprehensive income	108	108	108
Total stockholders' (deficit) equity	(67,936)	124,684	224,494
Total capitalization	$124,684	$124,684	$ 224,494

The table above excludes the following:

- 2,674,405 shares of Class A common stock issuable upon the exercise of options outstanding as of December 31, 2023, with a weighted-average exercise price of $5.91 per share;
- 242,278 shares of Class A common stock issuable upon the exercise of options granted after December 31, 2023 and through March 31, 2024, with a weighted-average exercise price of $16.18 per share;
- 15,764 shares of Class A common stock issuable upon the exercise of an outstanding warrant to purchase shares of our Series B convertible preferred stock, which will convert into a warrant to purchase 15,764 shares of our common stock in connection with the completion of this offering, at an exercise price of $9.52 per share;
- 502,491 shares of Class A common stock reserved for future issuance under our 2012 Plan, as of December 31, 2023, which shares will be added to the shares to be reserved under our 2024 Plan upon its effectiveness;
- 2,700,000 shares of Class A common stock reserved for future issuance under our 2024 Plan, as well as any future automatic increases in the number of shares of Class A common stock reserved for future issuance under this plan; and
- 280,000 shares of Class A common stock reserved for future issuance under our 2024 ESPP, as well as any future automatic increases in the number of shares of Class A common stock reserved for future issuance under this plan.

DILUTION

If you invest in our Class A common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the initial public offering price per share of our Class A common stock and the pro forma as adjusted net tangible book value per share of our Class A common stock immediately after this offering. Dilution results from the fact that the per share offering price of our Class A common stock is substantially higher than the book value per share attributable to our existing stockholders.

Historical net tangible book value (deficit) per share represents our total tangible assets less our liabilities and preferred stock that is not included in equity divided by the total number of shares of common stock outstanding. As of December 31, 2023, our historical net tangible book value (deficit) was approximately $(67.9) million, or $(28.91) per share based on 2,349,554 shares of Class A common stock and no shares of Class B common stock outstanding as of that date.

Our pro forma net tangible book value as of December 31, 2023 was $124.7 million, or $6.83 per share of common stock. Our pro forma net tangible book value per share represents the amount of our total tangible assets (which excludes deferred offering costs) less our total liabilities and divided by the total number of shares of our common stock outstanding as of December 31, 2023, after giving effect to (i) the automatic conversion of 15,906,236 shares of our outstanding convertible preferred stock as of December 31, 2023 into an aggregate of 15,906,236 shares of our common stock, consisting of 14,172,898 shares of our Class A common stock and 1,733,338 shares of Class B common stock immediately prior to the completion of this offering and (ii) the filing and effectiveness of our amended and restated certificate of incorporation in Delaware.

Net tangible book value dilution per share to new investors in this offering represents the difference between the amount per share paid by purchasers of shares of Class A common stock in this offering and the pro forma as adjusted net tangible book value per share of our common stock immediately after completion of this offering. After giving effect to (i) the pro forma adjustments set forth above and (ii) our sale in this offering of 6,875,000 shares of our Class A common stock at the initial public offering price of $16.00 per share, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of December 31, 2023 would have been approximately $224.5 million, or $8.93 per share of our common stock. This represents an immediate increase in pro forma net tangible book value of $2.10 per share to our existing stockholders and an immediate dilution in net tangible book value of $7.07 per share to investors in this offering, as illustrated in the following table:

The following table illustrates this dilution to new investors on a per share basis:

Initial public offering price per share		$16.00
Historical net tangible book value (deficit) per share as of December 31, 2023	$(28.91)	
Increase in historical net tangible book value (deficit) per share attributable to pro forma adjustments	35.74	
Pro forma net tangible book value per share as of December 31, 2023	6.83	
Increase in pro forma net tangible book value per share attributable to new investors in this offering	2.10	
Pro forma as adjusted net tangible book value per share immediately after this offering		8.93
Dilution per share to new investors purchasing shares in this offering		$ 7.07

If the underwriters' option to purchase additional shares in this offering is exercised in full, the pro forma as adjusted net tangible book value would be $9.17 per share, the increase in the pro forma net tangible book value per share for existing stockholders would be $2.34 per share and the dilution to new investors participating in this offering would be $6.83 per share.

The following table summarizes, on a pro forma as adjusted basis described above as of December 31, 2023, the total cash consideration paid and the average price per share paid by our existing stockholders and by our new investors purchasing shares in this offering at the initial offering price of our Class A common stock of $16.00 per share, before deducting underwriting discounts and commissions, and estimated offering expenses payable by us:

	Shares Purchased		Total Consideration		Weighted-Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	18,255,790	72.6%	$193,965,000	63.8%	$ 10.62
New investors	6,875,000	27.4	110,000,000	36.2	16.00
Total	25,130,790	100%	$303,965,000	100%	

In addition, if the underwriters' option to purchase additional shares is exercised in full, the number of shares held by existing stockholders will be reduced to 69.8% of the total number of shares of common stock to be outstanding upon completion of this offering, and the number of shares of Class A common stock held by new investors participating in this offering will be further increased to 30.2% of the total number of shares of common stock to be outstanding upon completion of the offering.

The foregoing discussion and tables are based on 16,522,452 shares of our Class A common stock outstanding as of December 31, 2023, and gives effect to the automatic conversion of 15,906,236 shares of our outstanding convertible preferred stock as of December 31, 2023 into an aggregate of 15,906,236 shares of our common stock, consisting of 14,172,898 shares of our Class A common stock and 1,733,338 shares of our Class B common stock immediately prior to the completion of this offering, and excludes:

- 2,674,405 shares of Class A common stock issuable upon the exercise of options outstanding as of December 31, 2023 with a weighted-average exercise price of $5.91 per share;
- 242,278 shares of Class A common stock issuable upon the exercise of options granted after December 31, 2023 and through March 31, 2024 with a weighted-average exercise price of $16.18 per share;
- 15,764 shares of Class A common stock issuable upon the exercise of an outstanding warrant to purchase shares of our Series B convertible preferred stock, which will convert into a warrant to purchase 15,764 shares of our Class A common stock in connection with the completion of this offering, at an exercise price of $9.52 per share;
- 502,491 shares of Class A common stock reserved for future issuance under our 2012 Plan, as amended, as of December 31, 2023, which shares will be added to the shares to be reserved under our 2024 Plan upon its effectiveness;
- 2,700,000 shares of Class A common stock reserved for future issuance under our 2024 Plan, as well as any future automatic increases in the number of shares of Class A common stock reserved for future issuance under this plan; and
- 280,000 shares of Class A common stock reserved for future issuance under our 2024 ESPP, as well as any future automatic increases in the number of shares of Class A common stock reserved for future issuance under this plan.

To the extent that any outstanding options or warrants are exercised or new awards are granted under our equity compensation plans, new investors will experience further dilution.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our financial statements and the related notes to those statements included elsewhere in this prospectus. In addition to historical financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results and timing of selected events may differ materially from those anticipated in these forward-looking statements as a result of many factors, including, but not limited to, those discussed under the section titled "Risk Factors" and elsewhere in this prospectus. See the section titled "Special Note Regarding Forward-Looking Statements" elsewhere in this prospectus.

Overview

We are a clinical stage biopharmaceutical company focused on discovering and developing novel, oral small molecule therapies that target biological pathways associated with specific clinical impairments for the treatment of NI&I indications with high unmet need.

We have focused our efforts on developing selective compounds targeting challenging molecular pathways, and through these efforts, have built a portfolio of small molecule drug candidates. Our wholly-owned lead asset, PIPE-791, is a novel, brain penetrant, small molecule inhibitor of LPA1R in development for IPF and Progressive MS. LPA1R antagonism is a clinically validated mechanism, and we believe that our preclinical studies and Phase 1 healthy volunteer data support the continued development of PIPE-791 for both IPF and Progressive MS. Specifically, based on its high bioavailability, low plasma protein binding, and long receptor residence time in our preclinical studies compared to the preclinical data of other LPA1R antagonists that we know are currently in development, we also believe PIPE-791 has the potential to be a differentiated LPA1R therapy. We completed a Phase 1 clinical trial of PIPE-791 in healthy volunteers in support of clinical development in both IPF and Progressive MS. We plan to submit a CTA to the MHRA to commence a Phase 1b open-label trial of PIPE-791 to measure the relationship of PK to lung and brain receptor occupancy by PET imaging in 2024. This Phase 1b trial will inform dose selection for our planned future Phase 2 trials of PIPE-791 in IPF and Progressive MS. Our second drug candidate, PIPE-307, is a novel, small molecule selective inhibitor of the muscarinic type M1R, in development for depression and RRMS. M1R antagonism has been clinically validated in third-party trials in both depression and RRMS by scopolamine and clemastine, respectively. We have completed two Phase 1 trials of PIPE-307 in healthy volunteers and have initiated a Phase 2 trial of PIPE-307 for the potential treatment of RRMS. To our knowledge, PIPE-307 is the most clinically advanced selective M1R antagonist in development. We are developing PIPE-307 in collaboration with J&J.

In addition, we are leveraging our drug discovery capabilities synergistically with our clinical portfolio. In January 2024, we nominated and commenced preclinical studies for CTX-343, a peripherally-restricted (unable to cross the BBB) LPA1R antagonist. In parallel, we are actively conducting preclinical and discovery-phase experiments targeting other NI&I indications where our internally-discovered molecules may have therapeutic potential.

Since the commencement of our operations in 2012, we have devoted substantially all of our resources in support of our product development efforts, hiring personnel, raising capital to support and expand such activities and providing general and administrative support for these operations. We have not generated any revenue from product sales and have funded our operations from the issuance of convertible promissory notes, private placements of our preferred stock and a term loan. We also received $50.0 million in an upfront payment from J&J pursuant to the J&J License Agreement. We have incurred a net loss of $24.3 million for the year ended December 31, 2022 and generated $22.7 million

net income for the year ended December 31, 2023. As of December 31, 2023, we had an accumulated deficit of $75.1 million. We expect to continue to incur significant losses for the foreseeable future.

We expect our operating expenses to significantly increase as we continue to develop, conduct clinical trials, and seek regulatory approvals for our drug candidates, engage in other research and development activities to expand our pipeline of drug candidates, expand our operations and headcount, maintain and expand our intellectual property portfolio, and, if we obtain approval for one or more of our drug candidates, launch commercial activities. We also expect to incur additional operating expenses as we begin operating as a public company. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing and scope of our clinical trials and our expenditures on other research and development activities.

As we continue to pursue our business plan, we expect to finance our operations through both public and private sales of equity, debt financings or other commercial arrangements, which could include income from collaborations, strategic partnerships or marketing, distribution, licensing or other strategic arrangements with third parties. However, there can be no assurance that any additional financing or strategic transactions will be available to us on acceptable terms, if at all. If events or circumstances occur such that we do not obtain additional funding, we may need to delay, reduce or eliminate our product development or future commercialization efforts, which could have a material adverse effect on our business, results of operations or financial condition. Further, if we raise funds through licensing or other commercial arrangements with third parties, we may be required to relinquish valuable rights to our technology, future revenue streams, research programs or drug candidates or may be required to grant licenses on terms that may not be favorable to us and/or may reduce the value of our common stock.

As of December 31, 2023, we had cash, cash equivalents and marketable securities of $125.2 million. Based on our current operating plan, we believe that our existing cash, cash equivalents, and marketable securities as of the date of this prospectus, together with the estimated net proceeds from this offering, will be sufficient to fund our projected operations through at least the end of 2027.

Collaboration

In February 2023, we entered into the J&J License Agreement, pursuant to which we granted J&J an exclusive, worldwide license to develop, manufacture and commercialize PIPE-307 in all indications.

J&J is generally responsible for all development, manufacturing and commercialization activities for PIPE-307. Upon J&J conducting a first Phase 3 clinical trial for a product using PIPE-307, we have an opt-in right to fund a portion of all Phase 3 and subsequent development costs for PIPE-307. If we opt to fund such development costs, then the royalties we are eligible to receive will increase by one to two percentage points.

We are conducting, at our own expense, a Phase 2 clinical trial of PIPE-307 in patients with RRMS. J&J has the right to discontinue our clinical trial if it has good faith concerns that this trial presents safety risks or could have a material adverse effect on its development or commercialization of PIPE-307. In addition, J&J has the right, in its sole discretion, to further develop or to elect not to develop PIPE-307 for this indication.

The J&J License Agreement expires on a licensed product-by-product and country-by-country basis upon the last to occur of: (i) the expiration of the last-to-expire licensed patent claim covering the composition of matter of the licensed compound in such licensed product in such country; (ii) the expiration of exclusive marketing rights conferred by a regulatory authority or applicable law (other than patent exclusivity) for such licensed product in such country; and (iii) ten years after the first commercial sale of such licensed product in such country. Either party may terminate the J&J License

Agreement in the event of an uncured material breach by the other party or a bankruptcy or insolvency of the other party. J&J may terminate the J&J License Agreement without cause upon prior written notice to us. Upon any termination, all license rights granted to J&J terminate.

Financial Operations Overview

Revenue

We recognize license revenues as identified performance obligations are satisfied or other events occur, specifically related to our J&J License Agreement. Pursuant to the terms of the J&J License Agreement, we received an upfront payment of $50.0 million in May 2023. We are also eligible to receive approximately $1.0 billion in non-refundable, non-creditable milestone payments, pursuant to the terms of the J&J License Agreement. Additionally, we are eligible to receive tiered royalties in the low-double digit to high-teen percent range on net sales of products containing PIPE-307. We determined that the initial transaction price under the J&J License Agreement equals $50.0 million, consisting solely of the upfront, non-refundable payment of $50.0 million.

Operating Expenses

Research and Development

Research and development costs consist primarily of costs incurred for the unallocated internal research and development costs:

Direct costs include:

- employee-related expenses, including salaries, related benefits, travel that can be directly attributable to each research project;
- expenses incurred in connection with research, laboratory consumables and preclinical studies;
- expenses incurred in connection with conducting clinical trials, including investigator grants and site payments for time and pass-through expenses and expenses incurred under agreements with CROs, other vendors or central laboratories and service providers engaged to conduct our trials;
- the cost of consultants engaged in research and development related services;
- the cost to manufacture drug products for use in our preclinical studies and clinical trials; and
- costs related to regulatory compliance.

Unallocated internal research and development costs include:

- employee-related expenses, including salaries, related benefits, travel that cannot be directly attributable to a specific research project;
- stock-based compensation expenses for employees engaged in research and development functions; and
- facilities, depreciation and other related expenses.

We expense our research and development costs as they are incurred. We record advance payments for goods or services to be received in the future for use in research and development as prepaid expenses. We then expense the prepaid amounts as the related goods are delivered or the services are performed.

We track outsourced development costs, consultant costs and other external research and development costs such as third-party contract costs relating to manufacturing, clinical trial activities, translational medicine and toxicology activities to specific programs. We allocate employee related costs including salaries and related benefits based upon the level of effort for each specific project.

Certain employee activities that cannot be allocated to any one specific project or management related activities are considered indirect costs. The following tables summarize our research and development expenses for the years ended December 31, 2022 and 2023. The direct external development program expenses reflect external costs attributable to our clinical development and preclinical programs and personnel costs that can be directly attributed to a development program. The unallocated internal research and development costs include unallocated personnel costs, facility costs, stock-based compensation, laboratory consumables and discovery and research related activities.

	Years Ended December 31,	
	2022	2023
	(in thousands)	(in thousands)
Direct external development program expense		
PIPE-791	$ 4,928	$ 11,181
PIPE-307	5,633	4,565
Others	2,548	4,198
Unallocated internal research and development costs		
Personnel related	1,092	1,583
Stock-based compensation	887	1,061
Facilities costs	805	936
Others	1,001	4,078
Total research and development costs	$ 16,894	$ 27,603

Research and development activities are central to our business model. There are numerous factors associated with the successful commercialization of any of our drug candidates, including future clinical trial design and various regulatory requirements, many of which we cannot determine with accuracy at this time based on our stage of development. In addition, future regulatory factors beyond our control may impact our clinical development programs. Drug candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the preclinical and clinical development of any of our drug candidates and our costs may increase if we exercise our opt-in right to fund a portion of all Phase 3 and subsequent development costs for PIPE-307 pursuant to the J&J License Agreement. However, we expect that our research and development expenses will increase substantially in connection with our planned preclinical and clinical development activities in the near term and for the foreseeable future.

The successful development of our drug candidates is highly uncertain. This is due to numerous risks and uncertainties, including the following:

- successful completion of preclinical studies and clinical trials;
- delays in regulators or institutional review boards (IRBs) authorizing us or our investigators to commence or continue our clinical trials;
- our ability to negotiate agreements with clinical trial sites or CROs;
- the number of clinical sites included in our clinical trials;
- raising additional funds necessary to complete clinical development of our drug candidates;
- obtaining and maintaining patent, trade secret and other intellectual property protection and regulatory exclusivity for our drug candidates;
- establishing and qualifying manufacturing capabilities for clinical supplies of our drug candidates, whether directly or through qualified third party manufacturers;

- our ability to receive necessary regulatory approvals from the FDA and comparable governmental bodies outside the United States;
- our decision to elect to fund a portion of Phase 3 and subsequent development costs for PIPE-307;
- coverage for our products by governmental and third party payors;
- protecting and enforcing our rights in our intellectual property portfolio;
- our ability to successfully compete with our competitors and their product offerings; and
- maintaining a continued acceptable safety profile of the products following approval.

A change in the outcome of any of these variables with respect to the development of our drug candidates may significantly impact the costs and timing associated with the development of our drug candidates. We may never succeed in obtaining regulatory approval for any of our drug candidates or successfully commercialize our products, even if approved.

General and Administrative

General and administrative expenses consist primarily of salaries and employee-related costs, including stock-based compensation, for personnel in executive, finance and other administrative functions. Other significant costs include legal fees relating to intellectual property, patent applications, and corporate matters, professional fees for accounting and consulting services and facility-related costs.

We expect our general and administrative expenses will increase for the foreseeable future to support our increased research and development activities, the growth of our business operations and headcount and to reflect increased operating expenses as we begin operating as a public company. These increased costs will likely include increased expenses related to audit, legal, regulatory services associated with maintaining compliance with exchange listing and SEC requirements, director and officer insurance premiums and investor relations costs.

Other Income (Expense)

Change in Fair Value of Investor Rights and Obligations Liability

In November 2019, in connection with the closing of our Series B convertible preferred stock financing, we entered into an agreement (the Series B Investor Agreement) with one of the investors (the Series B Investor) who participated in such financing that contains future investor rights and obligations that we are required to account for as a liability and remeasure the liability to fair value at each reporting date, with any change in the fair value of the liability reported as a component of other income (expense). We entered into the Series B Investor Agreement in exchange for a premium paid by the Series B Investor for the shares of Series B convertible preferred stock it purchased. The Series B Investor Agreement requires us to license the intellectual property we own or control in a defined geography to the Series B Investor unless we either spend $2.0 million in support of the development of our business in such defined geography or the Series B Investor recognizes a rate of return of at least 15% per annum on the cash it invested in our Series B convertible preferred stock (the Qualified Return). The Series B Investor Agreement provides us with certain rights to repurchase the Series B Investor’s stock or to pay the Series B Investor an amount that would result in the Series B Investor achieving a Qualified Return.

The Series B Investor Agreement was amended and replaced in its entirety on November 30, 2022 (the Amended Series B Investor Agreement). The Amended Series B Investor Agreement

removed the intellectual property license requirement noted above provided that if the Company completes certain liquidation or merger and acquisition events (each a Transfer Event) prior to June 30, 2024, the Series B Investor shall be entitled, automatically to receive the greater of (1) the amount payable to the investor in the Transfer Event as a result of its ownership of the shares held by the investor on the effective date of the Transfer Event or (2) an amount equal to a rate of return of 15% per annum for the shares held by the investor on the effective date of the Transfer Event with respect to the investor's initial cash investment in such shares (the Transfer Event Right). If no Transfer Event takes place by June 30, 2024, the Series B investor has a right to sell shares to Company at a 15% rate of return (the Put Option Right). The Amended Series B Investor Agreement also provides that if a certain limited partner of the Series B Investor is no longer a limited partner prior to June 30, 2024 then the Transfer Event Right and the Put Option Right noted above will automatically terminate. The Company was informed on May 17, 2023 that the certain limited partner of the Series B Investor was no longer a limited partner of the Series B Investor and therefore the Transfer Event Right and the Put Option Right have terminated. Following the termination of the Transfer Event Right and the Put Option Right due to the change in the limited partner's status in May 2023, the Company settled the investor rights and obligations liability resulting in a gain of $2.9 million for the year ended December 31, 2023.

Interest Income

Interest income consists of interest earned on our cash, cash equivalents and marketable securities.

Interest Expense

Interest expense consists of (i) interest on our outstanding Loan Agreement with First Citizens Bank at a floating per annum interest rate, which was 7.75% as of December 31, 2022, and (ii) amortization of our debt discount associated with our loan and security agreement recorded in connection with the fair value of the warrant issued to First Citizens, the debt issuance costs incurred and the obligation to make a final payment fee. We repaid all of the outstanding principal on the First Citizens loan as of June 2023.

Income Taxes

We are subject to corporate U.S. federal and state income taxation. As of December 31, 2022 and 2023, we had federal net operating loss carryforwards of $72.9 million and $37.3 million, respectively, and state net operating loss carryforwards of $81.1 million and $81.4 million, respectively. As a result of the TCJA, for U.S. income tax purposes, net operating losses generated prior to January 1, 2018 can be carried forward for up to 20 years, while net operating losses generated on or after January 1, 2018 can be carried forward indefinitely, but are limited to 80% utilization against future taxable income each year. Utilization of our net operating loss carryforwards may be subject to a substantial annual limitation due to the ownership change limitations provided by the Code and similar state provisions. This annual limitation may result in the expiration of our net operating losses and credits before utilization.

We estimate our income tax provision, including deferred tax assets and liabilities, based on management's judgment. We record a valuation allowance to reduce our deferred tax assets to the amounts that are more likely than not to be realized. We consider future taxable income, ongoing tax planning strategies and our historical financial performance in assessing the need for a valuation allowance. If we expect to realize deferred tax assets for which we have previously recorded a valuation allowance, we will reduce the valuation allowance in the period in which such determination is first made.

We record liabilities related to uncertain tax positions in accordance with the guidance that clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements by prescribing a minimum recognition threshold and measurement attribute for purposes of financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return.

As of December 31, 2022 and 2023, we had gross unrecognized tax benefits of $2.7 million and $2.6 million, respectively, all of which would affect our income tax expense if recognized, before consideration of our valuation allowance.

Results of Operations

Comparison of the Years Ended December 31, 2022 and 2023

The following table summarizes our results of operations (in thousands) for the periods indicated:

	Years Ended December 31,		
	2022	2023	Change
License revenue	$ —	$ 50,000	$ 50,000
Operating expenses:			
Research and development	16,894	27,603	10,709
General and administrative	5,826	6,320	494
Total operating expenses	22,720	33,923	11,203
Income (loss) from operations	(22,720)	16,077	38,797
Other income (expense)			
Interest income	761	4,606	3,845
Interest expense	(388)	(208)	180
Change in fair value of preferred stock warrant liability	3	5	2
Change in fair value of investor rights and obligations liability	(1,817)	2,867	4,684
Other expense	(92)	(177)	(85)
Total other income (expense)	(1,533)	7,093	8,626
Income (loss) before income	(24,253)	23,170	47,423
Provision for income taxes	—	450	450
Net income (loss)	$(24,253)	$ 22,720	$ 46,973

License revenue. License revenues were $50.0 million for the year ended December 31, 2023. The revenue for the year ended December 31, 2023 is solely attributable to the upfront payment from the J&J License Agreement.

Research and development expenses. Research and development expenses were $16.9 million and $27.6 million for the years ended December 31, 2022 and 2023, respectively. The increase of $10.7 million was primarily due to a $4.6 million increase in contract research organization costs primarily for the Phase 1 healthy volunteer clinical trial for PIPE-791 and Phase 2 clinical trial for PIPE-307, $3.1 million of expenses paid to our consultants as a result of the receipt of the up-front payment from the J&J License Agreement, and a $2.9 million increase in manufacturing expense for PIPE-791.

General and administrative expenses. General and administrative expenses were $5.8 million and $6.3 million for the years ended December 31, 2022 and 2023, respectively. The increase of $0.5 million was primarily due to an increase in personnel-related expenses.

Interest income. Interest income was $0.8 million and $4.6 million for the years ended December 31, 2022 and 2023, respectively. The increase was due to a significant increase in funds invested in marketable securities in 2023 due to net proceeds from the extension of our Series C

convertible preferred stock financing of $60.1 million and the $50.0 million upfront payment from the J&J License Agreement. We also had an increase in yields on our marketable securities as yields increased through 2022 and 2023.

Change in fair value of investor rights and obligations liability. We recognized a $2.9 million gain related to the decrease in fair value of our investor rights and obligations liability for the year ended December 31, 2023 as a result of reducing the Series B convertible preferred stock premium liability to $0.0 discussed above. This was the result of the termination of the Transfer Event Right and the Put Option Right due to the change in a specified limited partner's status in May 2023.

Provision for income taxes. For the year ended December 31, 2023, due to statutory limitations on our ability to utilize research and development credits and net operating losses to offset year to date taxable income, we recorded tax expense of $0.5 million, on pretax income of $23.2 million.

Liquidity and Capital Resources

Sources of Liquidity

We have incurred net losses and negative cash flows from operations in nearly every reporting period since our inception and anticipate that we will continue to incur net losses for the foreseeable future. We expect to incur substantial expenditures as we advance our drug candidates through clinical development, undergo the regulatory approval process, engage in other research and development activities to expand our pipeline of drug candidates, expand our operations and headcount, maintain and expand our intellectual property portfolio and, if we obtain approval for one or more of our drug candidates, launch commercial activities. Specifically, in the near term we expect to incur substantial expenses relating to completing our clinical trials and our other product development activities. Furthermore, upon the completion of this offering, we expect to incur additional costs associated with operating as a public company, including significant legal, accounting, investor relations, director and officer insurance and other expenses that we did not incur as a private company.

Through December 31, 2023, we have funded our operations primarily through the issuance of convertible promissory notes, the private placements of our convertible preferred stock, the J&J License Agreement, and our term loan facility with First Citizens. Through December 31, 2023, we have raised gross proceeds of approximately $194 million from the issuance of our convertible preferred stock and promissory notes and have received an upfront payment from the J&J License Agreement of $50.0 million. Our cash equivalents are held in money market funds and marketable securities. At December 31, 2023, we had an accumulated deficit of $75.1 million.

From February 2021 through December 31, 2023, we issued an aggregate of 9,349,906 shares of Series C convertible preferred stock, resulting in total gross proceeds of approximately $140.2 million.

In September 2020, we entered into the Loan Agreement with First Citizens as administrative and collateral agent, and lender. The Loan Agreement had a floating interest rate of the higher of the Wall Street Journal Prime rate plus 0.25%, or 3.50%. The Loan Agreement was payable in equal monthly installments of principal, plus accrued and unpaid interest through the maturity date of June 1, 2024. In addition, we were obligated to pay a final payment fee of 6.0% of the original principal amount of the loan facility. We repaid all of the outstanding principal, the final payment fee and all outstanding and accrued interest on the First Citizens loan as of June 2023.

In connection with the Loan Agreement, we issued First Citizens a warrant to purchase 15,764 shares of Series B convertible preferred stock at an exercise price of $9.52 per share. The warrant expires ten years from the date of issuance.

As we continue to pursue our business plan, we expect to finance our operations through both public and private sales of equity, debt financings or other commercial arrangements, which could include milestone payments from collaborations, strategic partnerships or marketing, distribution, licensing or other strategic arrangements with third parties. However, there can be no assurance that any additional financing or strategic transactions will be available to us on acceptable terms, if at all. If events or circumstances occur such that we do not obtain additional funding, we may need to delay, reduce or eliminate our product development or future commercialization efforts, which could have a material adverse effect on our business, results of operations or financial condition. Further, if we raise funds through licensing or other commercial arrangements with third parties, we may be required to relinquish valuable rights to our technology, future revenue streams, research programs or drug candidates or may be required to grant licenses on terms that may not be favorable to us and/or may reduce the value of our common stock.

Cash Flows

The following table sets forth a summary of our cash flows for the period indicated (in thousands):

	Years Ended December 31,	
	2022	2023
Net cash provided by (used in) operating activities	$(20,121)	$ 19,349
Net cash provided by (used in) investing activities	22,299	(65,568)
Net cash provided by (used in) financing activities	(1,239)	56,176
Net increase in cash and cash equivalents	$ 939	$ 9,957

Operating Activities

Net cash provided by (used in) operating activities was $(20.1) million and $19.3 million for the years ended December 31, 2022 and 2023, respectively. The net cash used in operating activities for the year ended December 31, 2022 was primarily due to our net loss of $24.3 million, offset by $5.4 million of non-cash charges such as stock-based compensation, depreciation and amortization, amortization of premiums/discounts on marketable securities, the change in fair value of our investor rights and obligations liability, amortization of debt discount, amortization of right-of-use assets and a $1.2 million change in operating assets and liabilities.

The net cash provided by operating activities for the year ended December 31, 2023 was primarily due to our net income of $22.7 million from the revenue recognized in relation to the $50 million up-front payment from the J&J License Agreement, offset by $2.3 million of non-cash charges such as stock-based compensation, depreciation and amortization, amortization of premiums/discounts on marketable securities, the change in fair value of our investor rights and obligations liability, amortization of debt discount, amortization of right-of-use assets and a $1.1 million change in operating assets and liabilities.

Investing Activities

Net cash provided by investing activities was $22.3 million for the year ended December 31, 2022, which primarily consisted of $87.1 million of proceeds from sales and maturities of marketable securities,

partially offset by $64.8 million of purchases of marketable securities. Net cash used in investing activities was $65.6 million for the year ended December 31, 2023, which primarily consisted of $141.9 million of purchases of marketable securities and $0.4 million of purchases of property and equipment, partially offset by $76.7 million of proceeds from sales and maturities of marketable securities.

Financing Activities

Net cash used in financing activities was $1.2 million for the year ended December 31, 2022, primarily due to principal payments on the term loan of $1.2 million. Net cash provided by financing activities was $56.2 million for the year ended December 31, 2022, primarily due to net proceeds from the issuance of Series C convertible preferred stock of $60.1 million and proceeds from the exercise of stock options of $0.2 million, partially offset by principal payments on the term loan of $3.8 million and payments of deferred offering costs of $0.3 million.

Funding Requirements

We expect our operating expenses to significantly increase as we continue to develop and seek regulatory approvals for our drug candidates, engage in other research and development activities to expand our pipeline of drug candidates, expand our operations and headcount, maintain and expand our intellectual property portfolio, and, if we obtain approval for one or more of our drug candidates, launch commercial activities. Based on our current operating plan, we believe that our existing cash, cash equivalents, and marketable securities as of the date of this prospectus, together with the estimated net proceeds from this offering, will be sufficient to fund our projected operations through at least the end of 2027. However, our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement that involves risks and uncertainties, and our actual results could vary materially. We have based this estimate on assumptions that may prove to be wrong, and we could deplete our capital resources sooner than we expect. Additionally, the process of testing our drug candidates in clinical trials is costly, and the timing of progress and expenses in these trials is uncertain.

Our future capital requirements will depend on many factors, including:

- the type, number, scope, progress, expansions, results, costs and timing of, our clinical trials and preclinical studies for our drug candidates or other potential drug candidates or indications which we are pursuing or may choose to pursue in the future;
- the outcome, timing and costs of regulatory review of our drug candidates;
- the costs and timing of manufacturing for our drug candidates;
- our efforts to enhance our operational systems and hire additional personnel to satisfy our obligations as a public company, including enhanced internal controls over financial reporting;
- the costs associated with hiring additional personnel and consultants as our preclinical and clinical activities expand;
- the costs and timing of establishing or securing manufacturing facilities for our drug candidates;
- the costs and timing of establishing sales and marketing capabilities if any of our drug candidates are approved;
- our ability to establish and maintain strategic collaborations, licensing or other arrangements;
- the financial terms of any such agreements that we may enter into;
- our decision to elect to fund a portion of Phase 3 and subsequent development costs for PIPE-307

- the costs of obtaining, maintaining and enforcing our patent and other intellectual property rights; and
- costs associated with any drug candidates, products or technologies that we may in-license or acquire.

Until such time as we can generate significant revenue from sales of our drug candidates, if ever, we expect to finance our cash needs through public or private equity or debt financings or other commercial arrangements, including collaborations, strategic partnerships or marketing, distribution, licensing or other strategic arrangements with third parties. We may be unable to raise additional funds or enter into such commercial arrangements when needed, on favorable terms, or at all. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be or could be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. Debt financing and 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 funds through collaborations, or other similar arrangements with third parties, we may be required to relinquish valuable rights to our drug candidates, future revenue streams or research programs or may be required to grant licenses on terms that may not be favorable to us and may reduce the value of our common stock. If we are unable to raise additional funds through equity or debt financings or through commercial arrangements when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market our drug candidates even if we would otherwise prefer to develop and market such drug candidates ourselves.

Contractual Obligations and Commitments

Our contractual obligations and commitments relate to our operating leases that relate primarily to our leases of office and laboratory space in San Diego, California. Our total contractual commitments for our lease agreements amount to approximately $7.8 million as of December 31, 2023.

We enter into contracts in the normal course of business for contract research services, contract manufacturing services, professional services and other services and products for operating purposes. These contracts generally provide for termination after a notice period, and, therefore, are cancelable contracts and not included in the table above.

Off-Balance Sheet Arrangements

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

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of our assets, liabilities, revenue, and expenses and the disclosure of contingent assets and liabilities in our financial statements and accompanying notes. On an ongoing basis, we evaluate our estimates and judgments, including those related to accrued expenses, investor rights and obligations liability, stock-based compensation, and common stock valuation. We base our estimates and assumptions on historical experience, known trends and events, and various other

factors that we believe are reasonable and appropriate under the circumstances, the results of which form the basis for making judgments about the carrying values of our assets and liabilities that are not readily apparent from other sources. Our actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in Note 2 to our audited financial statements included elsewhere in this prospectus, we believe the following accounting policies and estimates to be the most critical to the preparation of our financial statements.

Revenue

Under Accounting Standards Update — Revenue from Contracts with Customers (Topic 606), we recognize revenue when our customer obtains control of promised goods or services, in an amount that reflects the consideration which we expect to receive in exchange for those goods or services. To determine the appropriate amount of revenue to be recognized for arrangements determined to be within the scope of Topic 606, we perform the following five steps: (i) identification of the contract(s) with the customer, (ii) identification of the promised goods or services in the contract and determination of whether the promised goods or services are performance obligations, (iii) measurement of the transaction price, (iv) allocation of the transaction price to the performance obligations, and (v) recognition of revenue when (or as) we satisfy each performance obligation. We only apply the five-step model to contracts when it is probable that we will collect the consideration we are entitled to in exchange for the goods or services we transfer to our customer.

A contract modification is a change in the scope or price (or both) of a contract that is approved by the parties to the contract. A contract modification exists when the rights and obligations that are created or changed by a modification are enforceable. We account for a contract modification as a separate contract when the scope of the contract increases, and the price of the contract increases by an amount that reflects the standalone selling prices of the additional promised goods or services that are distinct. If a contract modification is not accounted for as a separate contract, our accounting of the contract modification depends on whether the remaining goods or services are distinct from those already provided on or before the date of the contract modification. If the remaining goods or services are distinct from those already provided, we account for the contract modification as a termination of the existing contract and creation of a new contract. The amount of the consideration to be allocated to the remaining performance obligations consists of the consideration promised by the customer that was included in the estimate of the transaction price for the existing contract and that had not been recognized as revenues and the consideration promised as part of the contract modification. If the remaining goods or services are not distinct from those already provided, we account for the contract modification as if it were part of the existing contract and accounts for the effect that the contract modification has on the transaction price, and on the measure of progress toward complete satisfaction of the performance obligation, as a cumulative catch-up adjustment at the date of the contract modification.

Identification of the Contracts with the Customers

We evaluate every contract to determine whether it in its entirety or in part represent a contract with a customer, or a collaboration agreement and, based on this determination, apply appropriate accounting guidance.

We account for a contract with a customer that is within the scope of Topic 606 when all of the following criteria are met: (i) the arrangement has been approved by the parties and the parties are committed to perform their respective obligations, (ii) each party's rights regarding the goods or services to be transferred can be identified, (iii) the payment terms for the goods or services to be

transferred can be identified, (iv) the arrangement has commercial substance and (v) collection of substantially all of the consideration to which we will be entitled in exchange for the goods or services that will be transferred to the customer is probable.

Identification of the Performance Obligations

The promised goods or services in our collaboration and option arrangements consist of research and development services. The arrangements also have options for additional items (i.e., license rights). Options are considered to be marketing offers and are to be accounted for as separate contracts when the customer elects such options, unless we determine the option provides a material right which would not be provided without entering into the contract. The determination as to whether such options are material rights requires significant management judgment, and management considers factors such as other similar arrangements, market data and the terms of the contractual arrangement to make such conclusion. Performance obligations are promised goods or services in a contract to transfer a distinct good or service to the customer. Promised goods or services are considered distinct when: (i) the customer can benefit from the good or service on its own or together with other readily available resources and (ii) the promised good or service is separately identifiable from other promises in the contract. In assessing whether promised goods or services are distinct, we consider factors such as the stage of development of the underlying intellectual property, the capabilities of our customer to develop the intellectual property on their own and whether the required expertise is readily available.

Determination of the Transaction Price

We estimate the transaction price based on the amount of consideration we expect to receive for transferring the promised goods or services in the contract. The consideration may include both fixed consideration and variable consideration. At the inception of each arrangement that includes variable consideration, we evaluate the amount of the potential payments and the likelihood that the payments will be received. We utilize either the most likely amount method or expected value method to estimate the transaction price based on which method better predicts the amount of consideration expected to be received. If it is probable that a significant revenue reversal would not occur, the variable consideration is included in the transaction price.

All contingent future payments, which include research, development, regulatory, and sales-based royalty payments, have not been considered in the initial analysis, as they are contingent upon option(s) being exercised or are subject to significant risk of achievement.

Allocation of Transaction Price

We allocate the transaction price based on the estimated standalone selling price. We must develop assumptions that require judgment to determine the standalone selling price for each performance obligation identified in the contract. We utilize key assumptions to determine the standalone selling price, which may include other comparable transactions, pricing considered in negotiating the transaction, and the estimated costs. Certain variable consideration is allocated specifically to one or more performance obligations in a contract when the terms of the variable consideration relate to the satisfaction of the performance obligation and the resulting amounts allocated to each performance obligation are consistent with the amounts we would expect to receive for satisfying each performance obligation.

Recognition of Revenue

We evaluated the J&J License Agreement and concluded that it was a license of functional intellectual property, and that the identified performance obligations were satisfied upon the transfer of

the license, know-how, existing inventory and manufacturing technology. Accordingly, the $50.0 million upfront payment was recognized in May 2023 upon satisfaction of the performance obligations. The remaining consideration, consisting of future contingent milestone-based payments and royalties on net sales, is included in the transaction price when there is a basis to reasonably estimate the amount of the payment and the amount is not probable of a significant reversal of the revenue in future periods. Because of the risk that products in development with the license will not reach development-based milestones or receive regulatory approval, contingent milestone-based payments are generally included in the transaction price upon the achievement of such milestone, and royalties are included in the transaction price upon the underlying sale occurring.

Research and Development Expenses and Accruals

We are required to estimate our expenses resulting from obligations under contracts with vendors, consultants and contract research organizations, in connection with conducting research and development activities. The financial terms of these contracts are subject to negotiations, which vary from contract to contract and may result in payment flows that do not match the periods over which materials or services are provided under such contracts. We reflect research and development expenses in our financial statements by matching those expenses with the period in which services and efforts are expended. We account for these expenses according to the progress of the associated preclinical study or clinical trial as measured by the timing of various aspects of the trial or related activities. We determine accrual estimates through review of the underlying contracts along with preparation of financial models taking into account discussions with research and other key personnel as to the progress of studies, or other services being conducted. During the course of a trial, we adjust our rate of expense recognition if actual results differ from our estimates.

There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the research and development expense. In accruing service fees, we estimate 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 our estimate, we adjust the accrual or prepaid expense accordingly. 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 rather than when the payment is made. Although we do not expect our estimates to be materially different from amounts actually incurred, if our estimates of the status and timing of services performed differ from the actual status and timing of services performed, it could result in us reporting amounts that are too high or too low in any particular period. To date, there have been no material differences between our estimates of such expenses and the amounts actually incurred.

Investor Rights and Obligations Liability

In November 2019, in connection with the closing of our Series B convertible preferred stock financing, we entered into the Series B Investor Agreement with the Series B Investor, who was one of the investors participating in such financing. The Series B Investor Agreement provided the Series B Investor with future investor rights and obligations in exchange for paying a premium for the shares of Series B convertible preferred stock it acquired. We evaluated these additional rights and obligations and concluded that they met the definition of a derivative and therefore we recorded these rights and obligations at their calculated fair value at issuance.

We initially assessed the fair value of these rights and obligations as the additional premium paid by the Series B Investor to acquire these rights and obligations. We are required to revalue the investor rights and obligations liability at each reporting period, with changes in the fair value of the liability recorded as change in fair value of investor rights and obligations in our statements of operations and comprehensive loss. We use a Monte Carlo simulation model to determine the fair value.

The Monte Carlo simulation model uses inputs which are highly subjective assumptions and generally require significant management judgment. These assumptions include:

- *Equity Value*—See the subsection titled "—Common Stock Valuation" below.
- *Expected Volatility*—We derive the expected volatility of our Series B convertible preferred stock and our common stock from the average historical volatilities of comparable publicly traded companies within our peer group that were deemed to be representative of future stock price trends as our capital stock will not be publicly traded until the offering contemplated by this offering. We will continue to apply this process after the completion of this offering until a sufficient amount of historical information regarding the volatility of our own stock price becomes available.
- *Years Remaining Term*—The years remaining term represents the period that the liability is expected to be outstanding. The years remaining term is determined using a weighted probability of each exit scenario.
- *Risk-Free Interest Rate*—The risk-free interest rate is based on the U.S. Treasury zero-coupon issues in effect at the time of grant for periods corresponding with the expected term of the liability.

See Note 4 to our audited financial statements included elsewhere in this prospectus for more information concerning certain of the specific assumptions we used in applying the Monte Carlo simulation model to determine the estimated fair value of this investor rights and obligations liability. Certain assumptions involve inherent uncertainties and the application of significant management judgment.

We recorded a change in fair value of the investor rights and obligations liability of $2.9 million for the year ended December 31, 2023. As of December 31, 2022 and 2023, the investor rights and obligations liability was $2.9 million and $0.0 million, respectively.

Stock-Based Compensation Expense

Stock-based compensation expense represents the cost of the grant date fair value of employee, officer, director and non-employee stock options. We estimate the fair value of stock options on the date of grant using the Black-Scholes option pricing model and recognize the expense over the requisite service period of the awards, which is generally the vesting period, on a straight-line basis. We account for forfeitures when they occur and reverse any compensation cost previously recognized for awards for which the requisite service has not been completed, in the period that the award is forfeited.

The Black-Scholes option pricing model uses inputs which are highly subjective assumptions and generally require significant management judgment. These assumptions include:

- *Fair Value of Common Stock*—See the subsection titled "—Common Stock Valuation" below.
- *Expected Term*—The expected term represents the period that the options granted are expected to be outstanding. The expected term of stock options issued is determined using the simplified method (based on the average of the vesting term and the original contractual term) as we have concluded that our stock option exercise history does not provide a reasonable basis upon which to estimate the expected term.
- *Expected Volatility*—We derive the expected volatility of our common stock from the average historical volatilities of comparable publicly traded companies within our peer group that were deemed to be representative of future stock price trends as our common stock has not been publicly traded until the offering contemplated by this offering. We will continue to apply this process after the completion of this offering until a sufficient amount of historical information regarding the volatility of our own stock price becomes available.

- *Risk-Free Interest Rate*—The risk-free interest rate is based on the U.S. Treasury zero-coupon issues in effect at the time of grant for periods corresponding with the expected term of the options.
- *Expected Dividend Yield*—We have never paid dividends on our common stock and do not anticipate paying any dividends in the foreseeable future. Therefore, we used an expected dividend yield of zero.

See Note 8 to our audited financial statements included elsewhere in this prospectus for more information concerning certain of the specific assumptions we used in applying the Black-Scholes option pricing model to determine the estimated fair value of our stock options. Certain of such assumptions involve inherent uncertainties and the application of significant judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our stock-based compensation could be materially different.

We recorded stock-based compensation expense of $2.2 million for the year ended December 31, 2023, compared to $1.9 million for the year ended December 31, 2022. As of December 31, 2022 and December 31, 2023, there was approximately $4.0 million and $6.6 million, respectively, of total unrecognized stock-based compensation expense related to nonvested stock-based compensation arrangements granted under the 2012 Plan, is expected to be recognized over a weighted-average period of approximately 0.9 and 1.3 years, respectively.

The intrinsic value of all outstanding options as of December 31, 2023 was approximately $27.0 million based on the initial public offering price of $16.00 per share, of which approximately $21.0 million was related to vested options and approximately $6.0 million was related to unvested options.

In March 2024, we granted stock options to certain of our board members and employees to purchase approximately 0.2 million shares of our Class A common stock at an exercise price of $16.18 per share. The March 2024 stock options were granted from our 2012 Plan. Our board of directors determined the exercise prices for the stock options to be equal to the fair value of a share of our Class A common stock on the date of grant, based on input from management and a third-party valuation as of March 15, 2024. We established the fair value of the March 2024 grants for financial reporting purposes based on the determination by our board of directors of the fair value of a share of Class A common stock on the date of grant. While we have not yet prepared financial statements for the first quarter of 2024, we expect, solely for financial reporting purposes, to recognize stock-based compensation expense for the March 2024 grants of approximately $3.3 million, to be amortized over a weighted average term of 3.5 years. The amount of stock-based compensation expense related to these options is based upon our estimates, and could change as events and circumstances change.

Common Stock Valuation

We are required to estimate the fair value of the common stock underlying our stock-based awards when performing fair value calculations using the Black-Scholes option pricing model. Because our common stock has not been publicly traded until the completion of the offering contemplated by this prospectus, the fair value of the common stock underlying our stock-based awards has been determined on each grant date by our board of directors, with input from management, considering our most recently available third-party valuation of common shares. All options to purchase shares of our common stock are intended to be granted with an exercise price per share no less than the fair value per share of our common stock underlying those options on the date of grant, based on the information known to us on the date of grant.

Our determination of the value of our common stock was performed using methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants (AICPA), Audit and Accounting Practice Aid Series: Valuation of Privately Held Company Equity

Securities Issued as Compensation (AICPA Practice Aid). In addition, our board of directors considered various objective and subjective factors to determine the fair value of our common stock, including:

- valuations of our common stock performed by independent third-party valuation specialists;
- the anticipated capital structure that will directly impact the value of the currently outstanding securities;
- our results of operations and financial position;
- the status of our research and development efforts;
- the regulatory and clinical status of our drug candidates;
- the composition of, and changes to, our management team and board of directors;
- the lack of liquidity of our common stock as a private company;
- our stage of development and business strategy and the material risks related to our business and industry;
- external market conditions affecting the life sciences and biotechnology industry sectors;
- U.S. and global economic conditions;
- the likelihood of achieving a liquidity event for the holders of our common stock, such as an initial public offering, or a sale of our company, given prevailing market conditions; and
- the market value and volatility of comparable companies.

The AICPA Practice Aid prescribes several valuation approaches for setting the value of an enterprise, such as the cost, income and market approaches, and various methodologies for allocating the value of an enterprise to its common stock. The cost approach establishes the value of an enterprise based on the cost of reproducing or replacing the property less depreciation and functional or economic obsolescence, if present. The income approach establishes the value of an enterprise based on the present value of future cash flows that are reasonably reflective of our future operations, discounting to the present value with an appropriate risk adjusted discount rate or capitalization rate. The market approach is based on the assumption that the value of an asset is equal to the value of a substitute asset with the same characteristics.

In accordance with the AICPA Practice Aid, we considered the various methods for allocating the enterprise value to determine the fair value of our common stock at the applicable valuation date. Under the option pricing method (OPM), shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The value of the common stock is inferred by analyzing these options. The probability weighted expected return method (PWERM) is a scenario-based analysis that estimates the value per share based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available to us, as well as the economic and control rights of each share class.

Based on our early stage of development and other relevant factors, we determined that the hybrid method between the PWERM and OPM was the most appropriate method for allocating our enterprise value to determine the estimated fair value of our common stock for valuations performed prior to December 31, 2023. In determining the estimated fair value of our common stock, our board of directors also considered the fact that our stockholders could not freely trade our common stock in the public markets. Accordingly, we applied discounts to reflect the lack of marketability of our common stock based on the weighted-average expected time to liquidity.

Recently Issued Accounting Pronouncements

See Note 2 to our financial statements included elsewhere in this prospectus for recently issued accounting pronouncements.

Qualitative and Quantitative Disclosures about Market Risk

Interest Rate Risk

As of December 31, 2023, our cash equivalents consisted of interest-bearing money market accounts and marketable securities. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. Given the materiality of our investments, a hypothetical 100 basis point increase or decrease in interest rates during any of the periods presented would have resulted in an impact of $1.2 million on our financial results.

Foreign Currency Exchange Risk

We are exposed to market risk related to changes in foreign currency exchange rates. We contract with vendors that are located outside the United States and certain invoices are denominated in foreign currencies. We are subject to fluctuations in foreign currency rates in connection with such arrangements. To date, foreign currency transaction gains and losses have not been material to our financial statements, and we have not had a formal hedging program with respect to foreign currency. We believe a hypothetical 100 basis point increase or decrease in exchange rates during any of the periods presented would not have a material effect on our financial statements included elsewhere in this prospectus.

Effects of Inflation

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We believe that inflation has not had a material effect on our financial statements included elsewhere in this prospectus.

JOBS Act

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

We could be an emerging growth company until the earliest to occur: (i) the last day of the fiscal year in which we have more than $1.235 billion in annual gross revenue; (ii) the date we qualify as a “large accelerated filers” as defined in Rule 12b-2 under the Exchange Act, with at least $700 million of equity securities held by non-affiliates; (iii) the issuance, in any three-year period, by us of more than $1.0 billion in non-convertible debt securities; or (iv) the last day of the fiscal year ending after the fifth anniversary of this offering.

Even after we no longer qualify as an emerging growth company, we may continue to qualify as a “smaller reporting company,” which would allow us to take advantage of many of the same exemptions from disclosure requirements including reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements, if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue is less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million.

BUSINESS

Overview

We are a clinical stage biopharmaceutical company focused on discovering and developing novel, oral small molecule therapies for NI&I indications with high unmet need. We target biological pathways associated with specific clinical impairments that we believe, once modulated, will demonstrably alter the course of disease.

We have focused our efforts on developing selective compounds targeting challenging molecular pathways, and through these efforts, have built a portfolio of small molecule drug candidates. Our two clinical stage, internally-discovered drug candidates, PIPE-791 and PIPE-307, are each initially being developed in at least two distinct and separate indications that we believe will have broad applicability across multiple additional NI&I indications.

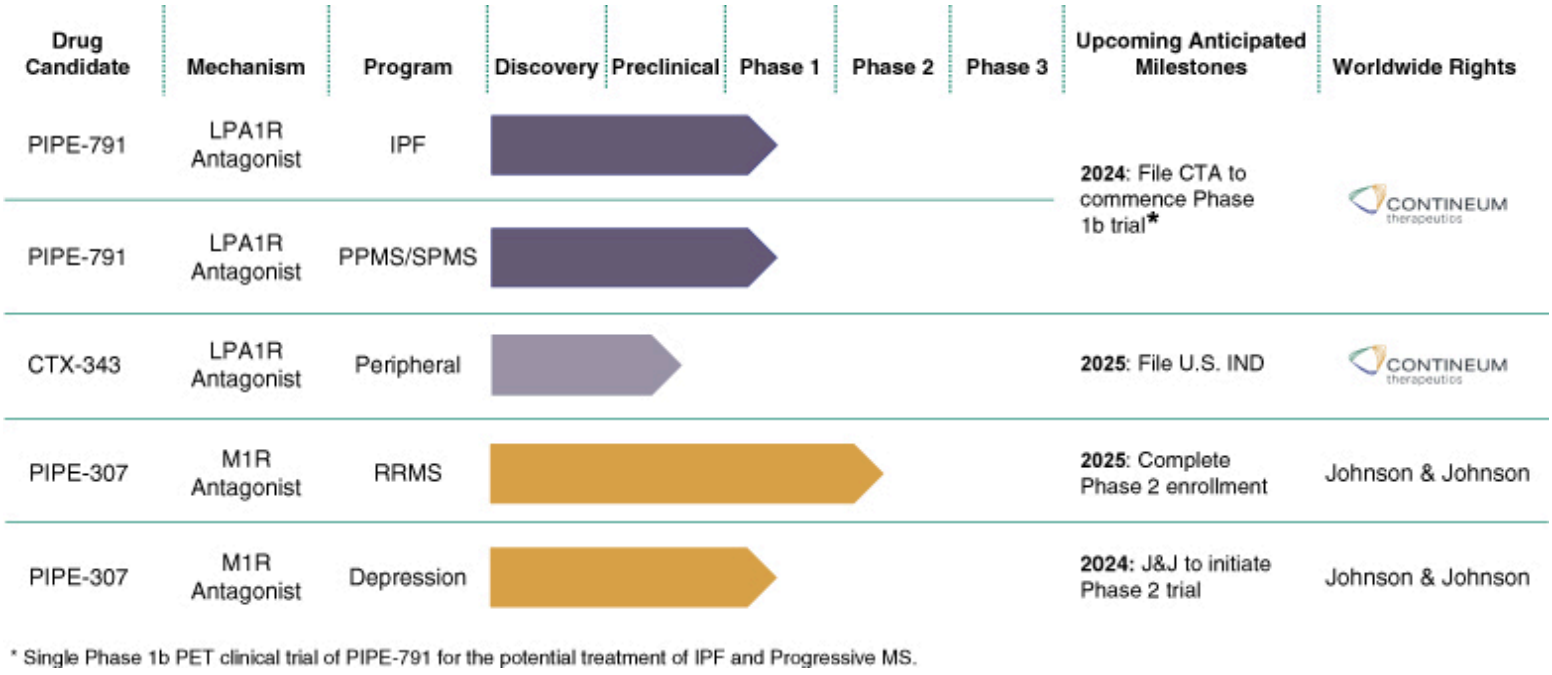
Our wholly-owned lead asset, PIPE-791, is a novel, brain penetrant, small molecule inhibitor of the LPA1R in development for IPF and Progressive MS. LPA1R antagonism is a clinically validated mechanism, and we believe that our preclinical studies and Phase 1 healthy volunteer data support the continued development of PIPE-791 for both IPF and Progressive MS. Specifically, based on its high bioavailability, low plasma protein binding, and long receptor residence time in our preclinical studies compared to the preclinical data of other LPA1R antagonists that we know are currently in development, we also believe PIPE-791 has the potential to be a differentiated LPA1R therapy. We completed a Phase 1 clinical trial of PIPE-791 in healthy volunteers in support of clinical development in both IPF and Progressive MS. We plan to submit a CTA to the MHRA to commence a Phase 1b open-label trial to measure the relationship of PK to lung and brain receptor occupancy by PET imaging in 2024. This Phase 1b trial will inform dose selection for our planned future Phase 2 trials of PIPE-791 in IPF and Progressive MS.

Our second drug candidate, PIPE-307, is a novel, small molecule selective inhibitor of the muscarinic type 1 M1R, in development for depression and RRMS. We have completed two Phase 1 trials of PIPE-307 in healthy volunteers and have initiated a Phase 2 trial of PIPE-307 for the potential treatment of RRMS. To our knowledge, PIPE-307 is the most clinically advanced selective M1R antagonist in development. We are developing PIPE-307 in collaboration with J&J.

In addition, we are leveraging our drug discovery capabilities synergistically with our clinical portfolio. In January 2024, we nominated and commenced preclinical studies for CTX-343, a peripherally-restricted (unable to cross the BBB) LPA1R antagonist. In parallel, we are actively conducting preclinical and discovery-phase experiments targeting other NI&I indications where our internally-discovered molecules may have therapeutic potential.

Our Clinical Pipeline

We have assembled a portfolio of novel and proprietary small molecule programs that we believe can modulate innate pathways to restore function in NI&I indications, as outlined in the table below. We retain worldwide rights to our LPA1R programs and discovery portfolio, and we have partnered with J&J for the development and potential commercialization efforts of PIPE-307.



* Single Phase 1b PET clinical trial of PIPE-791 for the potential treatment of IPF and Progressive MS.

PIPE-791

Our lead asset, PIPE-791, is a novel, high affinity, brain penetrant, small molecule LPA1R antagonist. We are initially developing PIPE-791 for the treatment of IPF and Progressive MS, and in parallel we are exploring the potential clinical utility of PIPE-791 in additional disorders where the LPA1 pathway has been implicated. We completed a Phase 1 trial to evaluate the safety, tolerability, and PK of single and multiple doses of PIPE-791 in healthy volunteers in support of clinical development in both IPF and Progressive MS. We plan to submit a CTA to the MHRA to commence a Phase 1b open-label trial of PIPE-791 to measure the relationship of PK to lung and brain receptor occupancy by PET imaging in 2024. This Phase 1b trial will inform dose selection for planned future Phase 2 trials of PIPE-791 in IPF and Progressive MS.

PIPE-791 for the Potential Treatment of IPF

We are developing PIPE-791 for the potential treatment of IPF. IPF is a rare, chronic, ILD, characterized by progressive fibrosis (thickening and scarring) of the lung tissue, leading to severe loss of respiratory function. Although the disease course is variable, the prognosis for overall survival is worse than many forms of cancer, with approximately 60% to 80% of patients dying from respiratory failure within five years of diagnosis. There are approximately 130,000 patients with IPF in the United States and three million cases worldwide as of 2017. There are two FDA-approved therapies for IPF, pirfenidone (Esbriet, marketed by Genentech/Roche) and nintedanib (Ofev, marketed by Boehringer Ingelheim), but these drugs do not stop progression of IPF and have limitations related to side effects, tolerability and multi-daily dosing regimens. IPF therefore remains an area of high unmet medical need.

The LPA/LPA1R pathway is a key mediator of fibrosis. LPA is a bioactive lipid that is elevated in response to lung injury and activates LPA1R. Activation of LPA1R drives a number of cellular cascades, including fibroblast recruitment and vascular leakage, that lead to fibrosis. Inhibition of LPA1 can reduce

these detrimental processes and may be a beneficial treatment for IPF. We have demonstrated this by our evaluation of PIPE-791 to reduce fibrosis in response to injury in a key *in vivo* rodent model for IPF. In addition, this is supported by third-party LPA1R antagonist programs, which have demonstrated clinical proof-of-concept in multiple Phase 2 clinical trials in IPF patients. Based on the dosing profile from our preclinical studies and the PK data from our Phase 1 healthy volunteer trial, we believe PIPE-791, pending further clinical development and FDA approval, has the potential to treat IPF with once-daily dosing. In contrast, currently approved IPF therapies require multiple-daily dosing regimens.

PIPE-791 for the Potential Treatment of Progressive MS

MS is a chronic, immune-mediated disease of the CNS characterized by neuro-inflammation and demyelination. The three main clinical categories of MS include RRMS, SPMS, and PPMS. We are developing PIPE-791 for the potential treatment of the two later categories, SPMS and PPMS, which are collectively referred to as Progressive MS. The chronic demyelination (and failure of endogenous remyelination) and chronic neuroinflammation are prominent pathological features that heavily contribute to the neurodegeneration and clinical disability in patients with Progressive MS.

The three main clinical forms of MS have differences in prevalence and presentation. RRMS comprises 85% of newly diagnosed MS patients, and the clinical course is marked by relapses and remissions, defined as disease flare-ups followed by periods of partial recovery. Many RRMS patients eventually progress to worsening disease, and it is estimated that roughly 50% to 70% of diagnosed RRMS patients progress to SPMS within 10 to 15 years. PPMS is the other category that comprises Progressive MS, and it is estimated that approximately 15% of newly diagnosed MS patients fall into this clinical category which is marked by a steady course of clinical progression from the time of presentation. In 2020, the global prevalence of MS was estimated to be 2.8 million patients, and we believe that more than 750,000 of this global population have Progressive MS (i.e., the collective population of SPMS and PPMS patients). Although substantial progress has been made in the development of effective immune-modulating treatments for RRMS, many of these approved drugs have been tested in Progressive MS with almost uniformly disappointing results. The relative lack of effective therapies for Progressive MS has further justified the exploration of novel treatment approaches. In that regard, the LPA/LPA1R axis has been proposed as a potential active pathway contributing to the pathophysiology of MS. Specifically, LPA is a pro-inflammatory lipid that has been shown to be elevated in the plasma and CSF of MS patients and that may promote neuroinflammation and limit remyelination through the activation of the LPA1R.

We have demonstrated in our preclinical studies that blocking LPA1R with PIPE-791 reduces neuroinflammation and promotes remyelination. We further demonstrate that the biological mechanism leading to remyelination involves PIPE-791-induced oligodendrocyte formation and survival. We confirmed this remyelination was functional via observed improvements in visual evoked potential (VEP) latency, a clinically translatable functional biomarker of remyelination.

We believe that PIPE-791 can be the first potential therapeutic to demonstrate the role of LPA1R antagonism in addressing the chronic neuroinflammation and demyelination associated with Progressive MS. To our knowledge, PIPE-791 is the only brain penetrant LPA1R antagonist in clinical development for Progressive MS.

CTX-343

In addition to PIPE-791, our brain penetrant drug candidate, we are also developing CTX-343, a peripherally-restricted LPA1R antagonist to further expand clinical indications involving LPA1R antagonism.

PIPE-307

Our second drug candidate, PIPE-307, is a novel, small molecule, selective inhibitor of M1R, which is in clinical development for the potential treatment of depression and RRMS. In February 2023, we entered into the J&J License Agreement, under which we granted J&J an exclusive, worldwide license to develop, manufacture and commercialize PIPE-307 in all indications. We received an upfront payment of $50.0 million, and we are eligible to receive milestone payments up to an aggregate of approximately $1.0 billion and tiered royalties in the low-double digit to high-teen percent range on future net sales of products containing PIPE-307. Additionally, we received a $25.0 million equity investment from JJDC. We are conducting a Phase 2 trial of PIPE-307 for the potential treatment of RRMS, which initiated in November 2023. In addition, J&J has the right, in its sole discretion, to further develop or elect not to develop PIPE-307 for RRMS. We have an opt-in right to fund a portion of all Phase 3 development costs for PIPE-307 in return for an increase in royalty rates by one to two percentage points. PIPE-307 is also in development for the potential treatment of depression, for which J&J plans to initiate a Phase 2 trial in 2024.

PIPE-307 for the Potential Treatment of Depression

Depression is one of the most common mood disorders with an approximate prevalence of 280 million people globally. Depression is associated with significant neuropsychiatric disability and increased mortality risk, and nearly 20% of U.S. adults suffer from the disorder. Despite numerous approved treatments, there remains a significant unmet medical need in the treatment of depression. It is well recognized that many patients fail to respond to currently available treatments, or the therapies are only partially effective. Further, these drugs are often associated with pronounced side effects, such as weight gain, sexual dysfunction, gastrointestinal issues and emotional blunting.

Targeting the cholinergic neurotransmitter system has been established as a strategy for the treatment of depression, strongly supported by studies testing scopolamine as a potential treatment agent. Scopolamine is a non-specific antagonist of all five muscarinic receptors (M1R through M5R), and has demonstrated rapid, robust, and durable antidepressant responses in patients with MDD and BPD. Further investigation showed that these clinical effects were specifically linked to M1R antagonism. However, the non-specific, anticholinergic properties of scopolamine lead to tolerability issues that are contraindicative in the setting of depression. As a selective M1R antagonist, we believe that the collective data support PIPE-307's development for the treatment of depression, while potentially avoiding off-target effects.

We have demonstrated proof-of-concept in PIPE-307 preclinical studies in depression, which exhibited increased miniature excitatory postsynaptic currents (mEPSC) amplitude, and increased presynaptic release events in the medial prefrontal cortex (mPFC) 24 hours after dosage. Further, PIPE-307 improved depression-like behaviors in a PST.

We believe that M1R antagonism has been identified as a key target to treat depression with supporting clinical proof-of-concept in multiple clinical trials with scopolamine. As a highly selective M1R antagonist, we believe that PIPE-307 may mitigate the side effects of scopolamine and therefore has the potential to be a novel therapeutic to treat depression.

PIPE-307 for the Potential Treatment of RRMS

We are also developing, in collaboration with J&J, PIPE-307 for the potential treatment of RRMS. A pathological hallmark of all forms of MS is the accumulation of demyelinating lesions that occur in the brain and spinal cord. In healthy neurons, myelin, which is a specialized extension of the plasma membrane of oligodendrocytes, serves as an insulator that allows for rapid and efficient conduction of

electrochemical signals along the axon. In MS, loss of myelin leads to slower signal transmission through the axon and eventual permanent loss of neuronal function. We believe treatments targeting remyelination, and the subsequent restoration of axonal conduction, can positively impact clinical disability and address the neurodegeneration associated with RRMS. While the FDA has approved over 20 therapies for RRMS that focus on immune modulation to reduce the annual rate of relapses associated with the inflammatory aspects of the disease, none of these therapies directly promote remyelination.

Clinical proof-of-concept for M1R antagonism and remyelination in RRMS was demonstrated in a Phase 2 randomized, double-blind, placebo-controlled crossover trial to assess the efficacy of clemastine, an FDA approved H1 antihistamine and non-selective antimuscarinic compound, as a remyelinating agent in RRMS. However, the antihistamine related side effects associated with clemastine complicate use of this drug in the MS patient population. In that regard, we developed PIPE-307 as a highly-selective M1R antagonist in order to avoid the side effects associated with broad anti-muscarinic agents.

We are currently enrolling a multi-center randomized, double-blind, placebo-controlled Phase 2 proof-of-concept trial of PIPE-307 as an adjunctive treatment in RRMS patients under IND authorization. We designed this trial, also referred to as the VISTA study, to assess efficacy and safety in patients with RRMS and to measure multiple clinical and imaging endpoints sensitive to changes in remyelination in RRMS.

Our Competitive Strengths

We have a strong, complementary relationship between our medicinal chemistry and biology functions and a team with broad and extensive expertise, which allows us to develop drug candidates for historically difficult targets. We believe that our competitive strengths include:

- Our broad expertise of NI&I indications allows us to seek to maximize the value of our drug candidates by developing them across multiple therapeutic areas.
- Our lead drug candidate, PIPE-791, targets the LPA1R, a clinically validated target for IPF, and, we believe, pending further clinical development and FDA approval, has the potential to treat IPF with once-daily dosing.
- We are advancing a new treatment paradigm in MS, by leveraging novel pathways that have the potential to support remyelination and reduce neuroinflammation.
- We have assembled a distinguished internal team and advisors that include pioneers of LPA1 and M1 biology, with decades of expertise in drug discovery and development.

Our Strategy

Our mission is to significantly impact the clinical disability associated with NI&I diseases with small molecules designed to modulate innate pathways to restore function. We aim to accomplish our goal by implementing the following strategies:

Execute a balanced development strategy in which we assess both external clinical validation and novel therapeutic approaches for our targets. We have built our current pipeline with the goal of minimizing clinical risk as we leverage external validation for our wholly-owned programs such as PIPE-791 for IPF and our partnered program PIPE-307 for both depression and RRMS. Based on scientific rationale, we also plan to progress breakthrough programs in disease areas where we believe there is potential to create significant clinical benefit and address high unmet need, such as our wholly-owned program PIPE-791 for Progressive MS.

Pursue clinical development of PIPE-791, a LPA1R antagonist, for the treatment of IPF, a sizeable market with high unmet need. There are approximately 130,000 patients in the United States with IPF, of which the average life span after diagnosis is three to five years. Currently, there are only two FDA-approved treatments in IPF, nintedanib and pirfenidone, which are limited by issues associated with safety, tolerability and compliance. LPA1R antagonism is a clinically validated mechanism, and we believe that our preclinical studies and Phase 1 healthy volunteer data support the continued development of PIPE-791 for both IPF and Progressive MS.

Pursue clinical development of PIPE-791 in Progressive MS to address the high unmet need for a therapy that has the potential to reduce neuroinflammation and support remyelination. We believe PIPE-791 has strong biological rationale to be a potentially novel treatment for Progressive MS.

Seek to maximize the value of PIPE-791 by investigating its applicability in a broad range of NI&I disorders beyond IPF and Progressive MS. We believe PIPE-791 has the potential for broad indication expansion due to the central role of LPA1 in multiple NI&I diseases and we are actively conducting preclinical experiments across those areas. Our future development strategy will be guided by data from our ongoing preclinical studies, observed external validation, and our focus on therapeutic potential in areas of high unmet need.

Support the advancement of PIPE-307 through a broad clinical development strategy through our partnership with J&J. J&J is an experienced innovator with a strong commitment to neuroscience, reporting $6.9 billion of neuroscience sales in 2022. Our collaboration provides a foundation for the development of PIPE-307 with J&J bearing the majority of the associated costs, and access to robust R&D and commercialization capabilities, which we believe will allow us to achieve the full potential of PIPE-307 in two large indications.

Further leverage our drug discovery capabilities to build out a franchise with deliberate focus on developing therapeutics that are synergistic with our existing portfolio, including our peripherally-restricted LPA1R antagonist, CTX-343. We believe that the development of a peripherally-restricted LPA1R antagonist drug candidate will provide us critical optionality for our portfolio. We will continue to leverage the capabilities and expertise of our team to identify and develop drug candidates with the highest likelihood of clinical and commercial success in NI&I.

Evaluate and selectively engage in strategic collaborations to maximize the potential of our pipeline. We recognize that circumstances might arise in which partnerships may provide a more prudent development path to reduce costs and accelerate the delivery of effective therapies to market, as exemplified by our partnership with J&J. Our collective expertise and strategic approach will guide us in selecting not only drug candidates with therapeutic potential but also ideal partners that can meaningfully contribute to the development and commercialization of our therapeutic portfolio.

Our Team

We have assembled a seasoned team with expertise in small molecule drug design across the fields of NI&I. Our Chief Executive Officer, Carmine Stengone, joined Contineum Therapeutics in October 2018. His previous roles include President, Chief Executive Officer and Director of Avelas Biosciences and co-founder and Chief Executive Officer of Afraxis, Inc. He also served as Senior Vice President, Business Development for COI Pharmaceuticals (now Avalon Bioventures) and a member of its investment committee, where he helped co-found six biotech companies, including two focused in neuroscience. Before that, he was with Phenomix Corporation as the Senior Director of Business Development, and previously held positions at Anadys and J&J. Daniel Lorrain is one of our founders

and serves as our Chief Scientific Officer with over 23 years of experience in small molecule drug discovery. Previously, Dr. Lorrain was Vice President of Biology at Inception Sciences where he led all aspects of biology and nonclinical pharmacology, including for Inception 5, a remyelination company acquired by Roche. Prior to this, he was at Amira Pharmaceuticals where he led development of the LPA1 program, which was a key driver in its acquisition by Bristol-Myers Squibb. Stephen Huhn serves as our Chief Medical Officer and Senior Vice President of Clinical Development and has over 15 years of experience in clinical development for neuroscience indications. Dr. Huhn previously served as Chief Medical Officer and Vice President of Clinical Development at StemCells, where he led multiple clinical programs in a wide range of neurology and ophthalmology indications. Dr. Huhn is a Fellow in the American Association of Neurological Surgeons, and was Chief of Pediatric Neurosurgery at Stanford University before joining StemCells in 2007. Peter Slover is our Chief Financial Officer and previously served as Chief Financial Officer at Sophiris, where he led Sophiris' initial public offering on the Nasdaq. Prior to that, he held several management positions at Anadys and spent seven years in public accounting at KPMG LLP.

LPA1 Franchise

Our lead asset, PIPE-791, is a novel, high affinity, brain penetrant, small molecule LPA1R antagonist. We are initially developing PIPE-791 for the treatment of IPF and Progressive MS, and in parallel we are exploring the potential clinical utility of PIPE-791 in additional disorders where the LPA1 pathway has been implicated. We completed a Phase 1 clinical trial of PIPE-791 that evaluated the safety, tolerability, and PK of single and multiple doses of PIPE-791 in healthy volunteers in support of clinical development in both IPF and Progressive MS.

We plan to submit a CTA to the MHRA to commence a Phase 1b open-label trial of PIPE-791 to measure the relationship of PK to lung and brain receptor occupancy by PET imaging in 2024. This Phase 1b trial will inform dose selection for our planned future Phase 2 trials of PIPE-791 in IPF and Progressive MS. In addition, we are advancing CTX-343, a peripherally-restricted LPA1R antagonist.

PIPE-791 for the Potential Treatment of IPF

We are developing PIPE-791 for the potential treatment of IPF. Based on the results of external and internal preclinical studies and emerging third-party clinical trials involving LPA1R antagonism to date, we believe there is a strong rationale for PIPE-791 to be disease modifying in IPF.

Disease Background

IPF is a chronic idiopathic interstitial lung disease characterized by progressive fibrosis of the lung tissue leading to severe loss of respiratory function. As the fibrosis progresses, the lung's ability to function and transfer oxygen into the bloodstream becomes increasingly impaired. Although the disease course is variable, the prognosis for overall survival is worse than many forms of cancer, with approximately 60% to 80% of patients dying from respiratory failure within five years of diagnosis.

IPF is a rare disease with approximately 130,000 patients in the United States and 30,000 to 40,000 new cases diagnosed annually, as of 2017. Worldwide, the prevalence is estimated to be three million cases, as of 2023. Although the mechanisms of fibrosis in IPF remain poorly understood, generally accepted concepts of disease pathogenesis involve recurrent subclinical injuries to alveoli (lung tissue) and failure of normal lung tissue repair. Injured cells within the alveoli release multiple cytokines and growth factors that promote the recruitment, proliferation, and differentiation of lung fibroblasts into myofibroblasts, leading to excessive collagen deposition, progressive scarring of the lung parenchyma, and irreversible loss of function. Although IPF is considered the prototypic progressive fibrosing ILD, a number of other ILDs display a progressive pathophysiology and clinical course similar to IPF.

IPF only effects the lungs, and patients generally present with non-specific symptoms such as shortness of breath on exertion, chronic cough, fatigue, and/or rapid weight loss. The diagnosis is most common in men ages 65 years and older. The major environmental factors that can lead to lung damage in IPF include cigarette smoking (current or ex-smokers), chronic viral infections, abnormal acid reflux, and environmental exposures. Genetic factors may also contribute to the development or worsen the prognosis of IPF. The physical, psychologic, and socio-economic consequences of IPF are burdensome on patients and healthcare providers, and are significantly exacerbated by an aging population.

Current Approved Therapies

While there is no pharmacological cure for IPF, there are two FDA-approved therapies to treat the disease: pirfenidone (Esbriet, marketed by Genentech/Roche) and nintedanib (Ofev, marketed by Boehringer Ingelheim). Both drugs were approved in 2014 and are recommended by the most recent treatment guidelines from 2015. Neither drug stops the progression of IPF and both are limited by issues associated with safety, tolerability and compliance with multi-daily dosing regimens. Lung transplant is currently the only cure for patients with IPF, but, due to age and comorbidities, this represents a realistic therapeutic option for only a minority of patients. We believe that PIPE-791 has the potential to address the limitations of current therapies and serve a large unmet need for IPF patients.

Pirfenidone is an orally available, synthetic compound that exerts anti-fibrotic, anti-inflammatory and antioxidant properties through down-regulation of key pro-fibrotic growth factors including TGF-β, inhibition of inflammatory cytokines (e.g., tumor necrosis factor-α) production and release, and reduction of lipid peroxidation and oxidative stress. Four registrational trials have evaluated the efficacy of pirfenidone in patients with IPF, with three showing that pirfenidone slows down disease progression as measured by rate of deterioration in forced vital capacity (FVC). Pirfenidone is prescribed in a dose-escalating pattern three times daily (TID) over a 14-day period to a target dose of 801 mg TID (total daily dose of 2,403 mg administered by nine 267 mg capsules). Common side effects of pirfenidone include gastrointestinal intolerance characterized by nausea, vomiting, dyspepsia, and diarrhea. Dose modification or discontinuation may be necessary in the case of severe side effects, with 19% of patients requiring dose reductions or interruptions due to gastrointestinal events in the clinical trials. Pirfenidone also carries the risk of skin reactions involving photosensitivity and rashes, with patients instructed to take sun exposure precautions.

Nintedanib is an intracellular inhibitor of vascular endothelial growth factor receptor 1–3, fibroblast growth factor receptor 1–3, and platelet-derived growth factor receptor α and β. By inhibiting these tyrosine kinase receptors, nintedanib interferes with a number of processes that have been implicated in the pathogenesis of IPF. Treatment with nintedanib in multiple clinical trials demonstrated a reduction in the one-year rate of decline in FVC by approximately 50%. The recommended dosage of nintedanib is 150 mg twice daily (BID) approximately 12 hours apart. The most frequent side effects associated with nintedanib are diarrhea (reported by approximately 60% of patients within the first 3 months of treatment, with over 10% of patients requiring permanent dose reduction), nausea, and vomiting. In addition to these gastrointestinal side effects, data from clinical trials with nintedanib noted a risk of arterial thromboembolic events, bleeding disorders, and gastrointestinal perforation.

In addition to the side effects noted above, which are associated with discontinuation of therapy, both pirfenidone and nintedanib have demonstrated risk for transaminitis, or elevation in liver enzymes. Both drugs require routine monitoring of liver function that can prompt dose reductions or treatment discontinuations, and each drug's label includes a warning relating to elevated liver enzymes and gastrointestinal disorders. Specifically, both pirfenidone and nintedanib have the additional warning of drug-induced liver injury and severe liver injury with fatal outcomes. Due to these issues associated with safety and tolerability, it has been estimated that approximately 40% to 50% of patients discontinued treatment on either drug within one year of initiation.

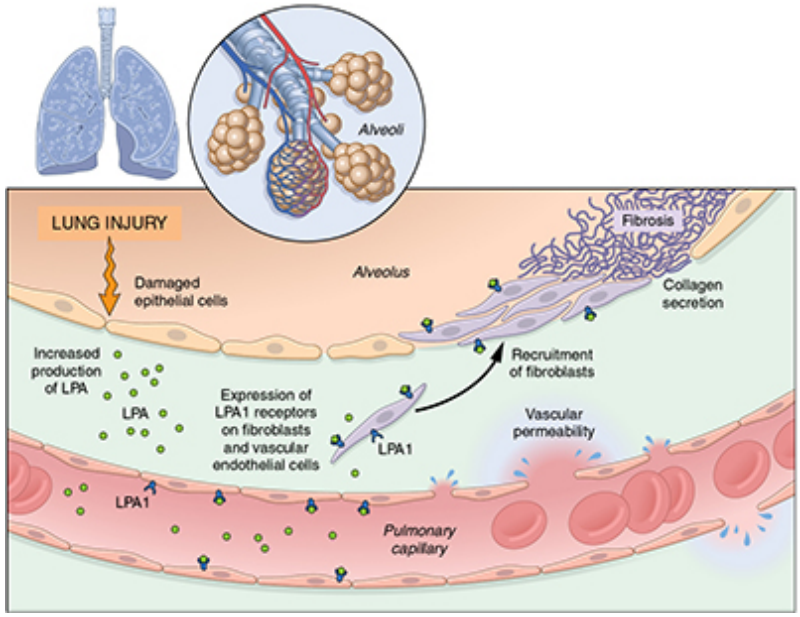
Despite the limitations highlighted above, pirfenidone and nintedanib generated more than $4 billion in combined total sales globally in 2022. Patent expiration for pirfenidone is 2022 (U.S.) and 2026 (EU and Japan), and the patent covering the API for nintedanib is 2025 (U.S., EU, Japan), respectively. In summary, IPF remains an indication with significant unmet need for effective therapies that can address some of these challenges.

Scientific Rationale for LPA1R Antagonism in IPF

LPA is a bioactive lysophospholipid that regulates numerous aspects of cellular function, such as proliferation, migration and cytoskeletal reorganization, and has been recognized as a novel mediator of wound healing and tissue fibrosis. LPA mediates its effects by signaling through a family of six G protein-coupled receptors, LPA1 to LPA6.

The link between the LPA/LPA1R pathway and IPF was first identified by Tager et al., 2008, following an observation that LPA, elevated in bronchoalveolar lavage fluid, promoted fibroblast migration. Using genetic knockout animals, studies demonstrated that this response was driven by activation of the LPA1R. In further studies, rodents lacking the LPA1R were protected from bleomycin-induced pulmonary fibrosis, one of the key animal models for IPF, by reducing fibroblast recruitment and vascular leak, as shown in the figure below. Subsequent studies have replicated these findings using small molecule LPA1R selective antagonists.

The following figure shows LPA1's mechanism in pulmonary fibrosis.



LPA1R antagonism has also demonstrated clinical proof-of-concept in third-party, randomized, double blind, placebo-controlled Phase 2 trials of LPA1R antagonists (BMS-986020 and BMS-986278) in patients with IPF.

The results of a Phase 2 parallel-arm, multi-center, randomized, double-blind, placebo-controlled trial in 143 adults with IPF treated with BMS-986020 were published in 2018. BMS-986020 is a high-affinity small molecule antagonist of the LPA1R. Patients in the 600mg BID cohort exhibited significantly slower rates of FVC decline from baseline to 26 weeks versus placebo. However, dose-related hepatobiliary toxicity led to early termination of the trial. After conducting additional toxicology investigations, BMS reported that hepatobiliary toxicity was likely caused by off-target inhibition of bile acids efflux transporters such as bile salt export pump (BSEP).

BMS-986278 is a second generation LPA1R antagonist that is biased away from BSEP, and the results of a Phase 2 trial in 276 IPF patients with this compound were recently released at the 2023 American Thoracic Society annual meeting. The outcome of the Phase 2 trial showed a statistically significant reduction in the decline in FVC following a 26-week administration of 60mg BID dose of BMS-986278 versus placebo with or without the use of background antifibrotic therapy. A global Phase 3 trial of BMS-986278 for IPF was recently initiated.

With regard to its high bioavailability, low plasma protein binding, and long receptor residence time in our preclinical studies, compared to the preclinical data of other LPA1R antagonists that we know are currently in development, we believe PIPE-791 has the potential to be a differentiated LPA1R therapy. We are developing PIPE-791 as a once daily (QD) therapy at low doses (<10 mg), compared to other LPA1R antagonists, including BMS-986278, which are being studied at significantly higher dose ranges (60-120 mg) all with BID administration.

PIPE-791 for the Potential Treatment of Progressive MS

We are also developing PIPE-791 for the potential treatment of Progressive MS. We believe that PIPE-791 has the potential to be a disease-modifying treatment (DMT) by impacting the neurodegeneration secondary to chronic demyelination and neuroinflammation, the two leading pathological contributors to clinical disability in Progressive MS. The development of a brain penetrant small molecule therapy that prevents worsening, reverses damage, and restores function would potentially address the major therapeutic unmet need in Progressive MS.

Disease Background

MS is a chronic, immune-mediated disease of the CNS characterized by demyelination and neuroinflammation which ultimately result in axonal loss and clinical disability. The destruction of myelin in the CNS is associated with activation of the adaptive immune system, represented by peripheral circulating T and B cells, and the innate immune system of the CNS, represented by microglia and macrophages. While demyelination, and subsequent failure of remyelination, is a core pathological feature across all forms and stages of MS, the adaptive immune system appears more active in the early (i.e., relapsed-remitting) stages of MS, and the innate immune system is more active in the later stages of MS (i.e., Progressive MS).

The prominent pathological features of demyelination and neuroinflammation in Progressive MS, combined with insufficient endogenous remyelination, ultimately results in axonal loss and clinical disability in Progressive MS. Demyelinated axons are susceptible to chronic injury and degeneration, as well as to reduced conduction capacity. In addition to demyelination, the chronically activated microglia of the innate immune system are implicated to play a central role in the neurodegeneration in Progressive MS. In post-mortem examinations of Progressive MS patients, activated microglia have been observed in chronically active lesions as well as normal-appearing white matter. Excessive activation of microglia is hypothesized to drive both acute and chronic axonal loss, by releasing toxic chemicals such as reactive oxygen species and nitric oxide, as well as by compounding further inflammation through the release of cytokines and inflammatory mediators that may attract additional immune cells. The chronic activation of microglia characteristic of Progressive MS is considered a major component of the emerging pathological construct referred to as “smoldering inflammation.”

The chronic neuroinflammation in Progressive MS is also associated with a relatively impermeable BBB in Progressive MS as compared to the more open BBB in RRMS. It has been hypothesized that in the setting of Progressive MS, the innate immune system drives neuroinflammation by activating local cellular responses behind a BBB that is less penetrable to peripheral T and B cells of the adaptive immune system. Because many DMTs that act on peripheral T

and B cells depend on a disrupted BBB for access to the CNS targets, this hypothesis may also explain the relative efficacy of DMTs in RRMS as compared to Progressive MS.

The clinical courses of SPMS and PPMS, while distinct from RRMS, are considered generally similar. Progressive MS is generally characterized by accrual of neurological disability independent of clinical relapses. The most common clinical manifestation in Progressive MS is myelopathy, or weakness of the legs and difficulty walking, followed by difficulty with balance and visual impairment. Patients with Progressive MS typically score more poorly than RRMS patients on the Expanded Disability Status Scale (EDSS), a common measure of neurological disability in MS.

Current Approved Therapies

In RRMS, the adaptive immune system drives neuroinflammation and demyelination that results in clinical relapses associated with new lesions observed by magnetic resonance imaging (MRI). In contrast, Progressive MS is marked by the accrual of clinical disability that is generally independent of relapses and new focal lesion formation. The majority of DMTs that dampen the inflammatory activity of adaptive immune cells associated with early disease course typified by RRMS have generally not been effective in Progressive MS. With the exception of mitoxantrone for the specific diagnosis of secondary (chronic) SPMS (which is rarely used in the United States due to issues related to safety and tolerability), and ocrelizumab for PPMS, none of the MS medications approved by the FDA carry a specific indication for Progressive MS.

Although many DMTs approved for RRMS also carry the indication for SPMS with clinical evidence of active inflammation, the EXPAND Phase 3 trial for siponimod was the only study in the last 20 years to meet the primary efficacy endpoint of slowing disability accumulation compared to placebo in active SPMS. The active form of SPMS is defined as including the presence of clinical relapses or new lesions by MRI examination. In contrast, natalizumab, one of the most effective DMTs in suppressing peripherally mediated inflammation in RRMS, did not reduce the proportion of SPMS patients with confirmed disability progression (CDP) in the ASCEND two-year Phase 3 trial. The outcomes of the ASCEND and EXPAND trials are consistent with the concept that increasing clinical disability in Progressive MS is being driven by immune processes compartmentalized to the CNS and that the adaptive immune system plays a less prominent role.

The treatment options for patients with PPMS are even more limited than the treatment options for SPMS. Ocrelizumab, a monoclonal antibody against the CD20 antigen on B cells, is the only FDA-approved treatment option for PPMS. Ocrelizumab was studied in an event-driven trial, with CDP as the primary endpoint. The key inclusion criteria were patients aged younger than 55, evidence of specific clinical disability by EDSS score, and the presence of CSF-specific oligoclonal bands or evidence of CNS inflammation through the presence of immunoglobulins. The primary outcome of the trial showed a 24% reduction in CDP ($p=0.03$). This reduction in CDP is considered moderate, and there was no significant between-group difference in the physical component of the quality-of-life measure. Safety risks related to ocrelizumab, while infrequent, can be severe and include infusion reactions, increased risk of infection, and reactivation of hepatitis B and herpes.

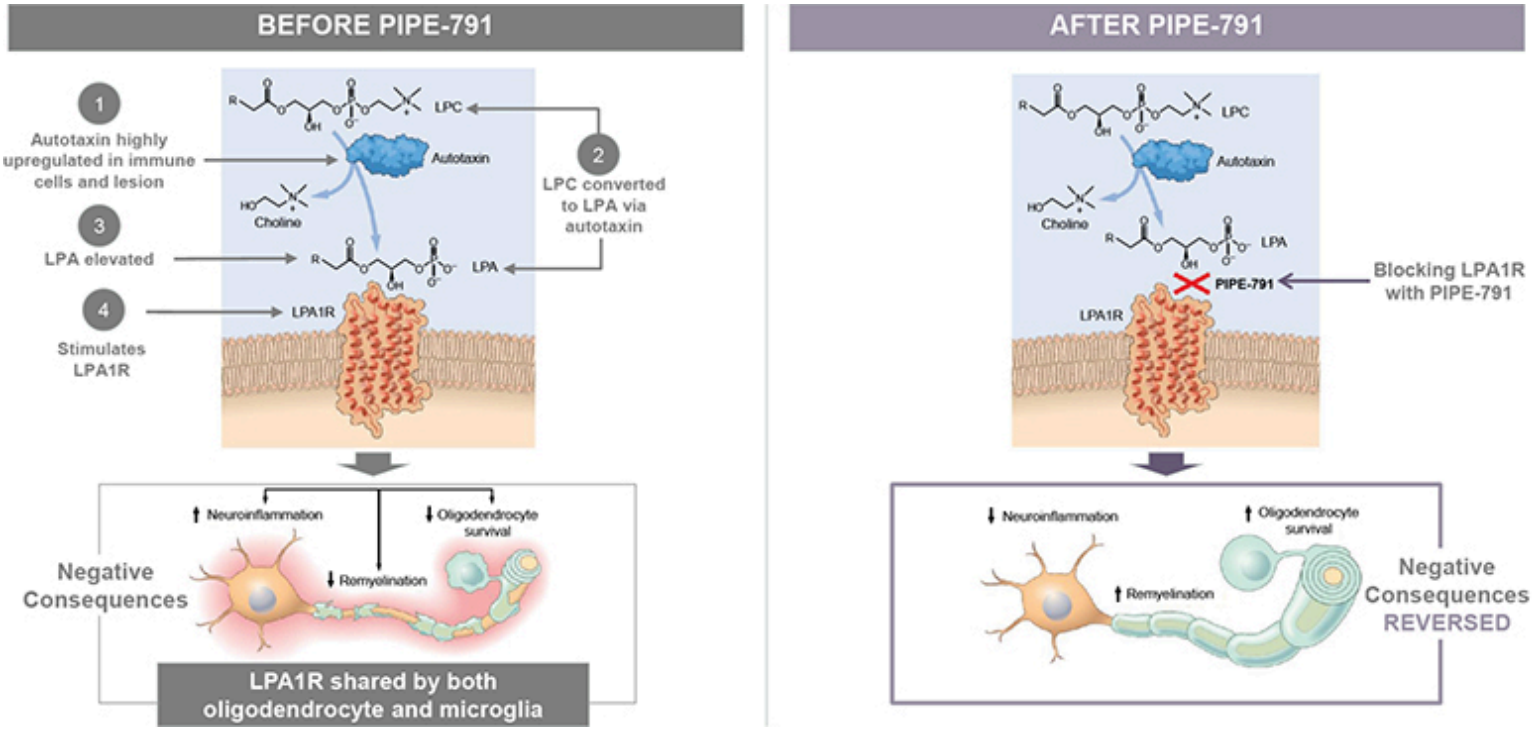
In summary, patients with Progressive MS have very few treatment options based on approved effective therapies.

Scientific Rationale for LPA1R Antagonism in Progressive MS

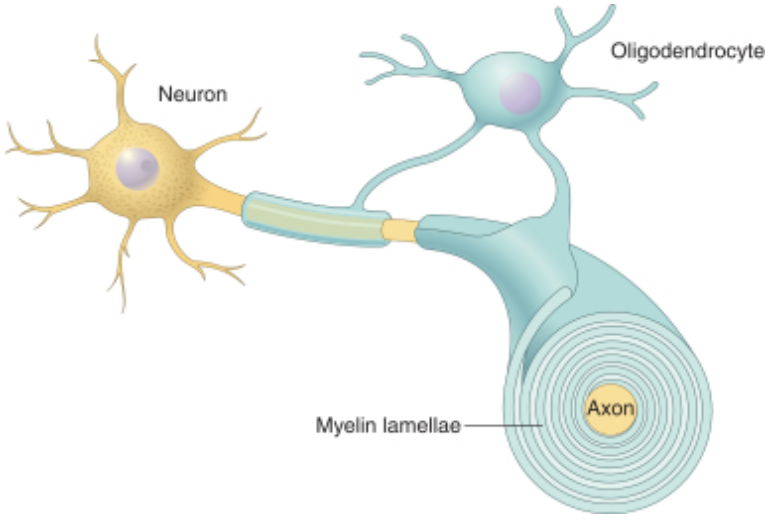
LPA is a pro-inflammatory lipid that is elevated in the plasma and CSF of MS patients and that may promote neuroinflammation and limit remyelination through the activation of specific receptors such as the LPA1R. LPA activates the G-protein coupled receptor LPA1, resulting in increased

cytokine and chemokine levels in the CNS, infiltration of peripheral immune cells, and microglial and astrocyte activation, which is part of the neuroinflammatory response that leads to demyelination. LPA may also suppress remyelination by directly activating LPA1R located on oligodendrocyte precursor cells (OPCs). Blocking the LPA/LPA1R pathway with PIPE-791 has the potential to be disease modifying by reducing neuroinflammation and promoting remyelination through inducing OPC differentiation into oligodendrocytes capable of remyelination. Additionally, PIPE-791 enhances survival of oligodendrocytes within an inflammatory environment.

The following figures show LPA1 is a key regulator of remyelination and neuroinflammation.



The following figure shows mature oligodendrocytes derived from differentiation of OPCs wrap the axons of neurons to protect and facilitate nerve conduction. The inability to restore myelin after a demyelinating injury to the axon results in long-term degeneration of the neuron.



Based on the potential for PIPE-791 to support remyelination and mitigate neuroinflammation, the leading causes of neurodegeneration and accrual of disability, we believe that there is strong biological rationale for LPA1R antagonism to have a clinical benefit in Progressive MS patients.

Our PIPE-791 Phase 1 Healthy Volunteer Trial

We completed a Phase 1 single ascending dose (SAD)/multiple ascending dose (MAD) and food effect (FED) clinical trial of PIPE-791 in healthy volunteers in January 2024. This trial was a single-center, double-blind, placebo-controlled safety, tolerability, and PK trial of oral administration of PIPE-791 in healthy male and female volunteers aged 18 to 55 years under IND authorization. The primary objective of the trial was to assess the safety and tolerability of single and repeat oral doses of PIPE-791 in healthy volunteer subjects. The secondary objective of the trial was to assess the single and repeat dose PK profile of PIPE-791. The trial met the primary and secondary objectives.

In the SAD component of the trial, we administered single doses of PIPE-791 to 24 participants across four dose cohorts of 1, 5, 10 and 20 mg, with six participants at each dose cohort (SAD1, SAD2, SAD3, and SAD4, respectively). Eight additional participants in the SAD component of the Phase 1 trial received placebo doses. We tested the subjects in the 10 mg SAD cohort after a single dose of PIPE-791 in both the fasted and FED state. In the MAD component of the trial, we administered PIPE-791 to 18 participants over 1, 3 and 10 mg dose cohorts, with six participants at each dose cohort (MAD1, MAD2, and MAD3, respectively). Six additional participants in the MAD component of the Phase 1 trial received placebo doses. The 1 and 3 mg MAD dose cohort participants received once-daily dosing over 7 days, and the 10 mg MAD dose cohort participants received once-daily dosing over 14 days.

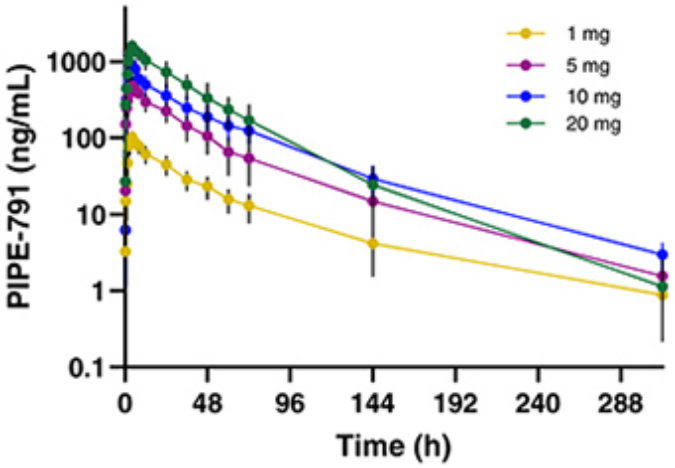
In this Phase 1 trial, PIPE-791 was shown to be well-tolerated across all four SAD and three MAD dose cohorts in healthy volunteers. Excluding AEs related to soreness secondary to venipuncture and contact dermatitis related to EKG electrode pads, all but three treatment emergent adverse events (TEAEs) were considered Grade 1. The two Grade 2 TEAEs under active drug assignment included a Grade 2 AE of back pain (SAD4) and a Grade 2 AE of consitpation (MAD3). A Grade 2 AE of headache was reported in a single placebo subject. There were no Grade 3 or Grade 4 AEs reported during the trial. All reported AEs recovered and resolved, and there were no dose-limiting AEs nor was a relationship or pattern to AEs and dose detected. There were no notable abnormal clinical laboratory values, ECG, or vital signs observed.

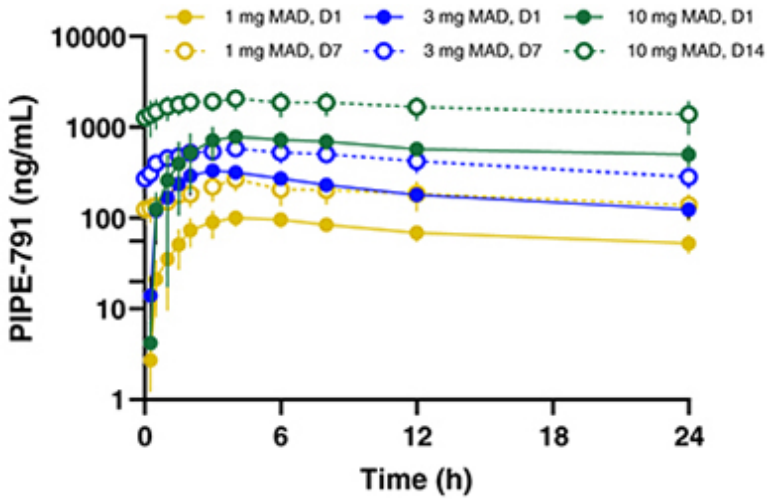
The following table provides the TEAEs that were reported in two or more trial participants.

TEAE* (Preferred Term)	Placebo (n=14)	SAD1 (n=6)	SAD2 (n=6)	SAD3 (n=6)	SAD4 (n=6)	MAD1 (n=6)	MAD2 (n=6)	MAD3 (n=6)
Abdominal pain		1	1					
Nasal congestion				1				1
URI			1					2
Rhinitis				1				1
Headache	1		1		3	1		
Back pain				1	2			

* AEs related to venipuncture soreness (n=2) and contact dermatitis secondary to ECG electrodes (n=9) have been excluded.

PIPE-791 displayed a SAD half-life dependent on dose that ranged from 55 to 31 hours for the 1 mg and 20 mg dose cohorts, respectively. Co-administration of PIPE-791 with food slightly delayed T_{max} and reduced C_{max} relative to the fasted state, but with no overall impact on exposure. The figures below provide the SAD PK for all four dose cohorts to Day 14 (left figure) and the 24-hour MAD PK for all three dose cohorts for Day 1 and Day 7 (MAD1 and MAD2) and Day 1 and Day 14 (MAD3) (right figure).





Our PIPE-791 Preclinical Toxicity Studies

We evaluated the toxicity profile of PIPE-791 in a comprehensive animal studies described below. The toxicology studies consisted of oral dosing in rodents and minipigs for up to 28 days, with four-week recovery periods. Furthermore, we completed a battery of *in vitro* and *in vivo* genotoxicity studies to assess the genotoxic potential of PIPE-791. In summary:

- We conducted single-dose, 14-day, and 28-day GLP toxicology studies in Sprague Dawley rodents. A no-observed-adverse-effect level (NOAEL) of 1000 mg/kg/day (the highest dose tested) was established in the 28-day GLP study, with no adverse effects or findings of toxicological significance observed at any dose level.
- We conducted single-dose, 14-day, and 28-day GLP toxicology studies in Göttingen minipigs. An NOAEL of 1000 mg/kg/day (the highest dose tested) was established in the 28-day GLP study, with no adverse effects or findings of toxicological significance observed at any dose level.
- We demonstrated that PIPE-791 was negative for mutagenicity in a GLP *in vitro* Ames test, negative for clastogenicity under 24-hour treatment conditions in a GLP *in vitro* chromosomal aberrations assay, and negative for clastogenicity *in vivo* in bone marrow following 28 days of repeat oral dosing at 1000 mg/kg/day in Sprague Dawley rodents.
- Based on these data, we have initiated six-month rodent and nine-month minipig chronic toxicity studies in January 2024.

Our PIPE-791 Development in IPF

Overview of PIPE-791 Preclinical Proof-of-Concept Studies

Through preclinical studies, we have demonstrated PIPE-791's *in vitro* pharmacology and *in vivo* pharmacodynamic properties, which are summarized below.

PIPE-791 is a Potent LPA1R Antagonist In Vitro

We tested PIPE-791 in a competitive membrane filter binding assay using membranes from cells overexpressing human LPA1. We found that PIPE-791 bound human LPA1R with single-digit

nanomolar potency with half maximal inhibitory concentration (IC_{50}). Next, we examined the kinetics of PIPE-791 binding to LPA1R in a recombinant membrane setting. We found that PIPE-791 exhibited slow association and dissociation kinetics. PIPE-791 was tested in a functional calcium (Ca^{2+}) mobilization assay using either 30 minutes or 24 hour pre-incubation periods prior to LPA addition. The slow on-rate kinetics of PIPE-791 likely contribute to the shift in potency observed going from the 30 minutes to the 24 hour Ca^{2+} mobilization assay. PIPE-791 also showed selectivity against the two most homologous LPA receptor isoforms, LPA2 and LPA3, with >30 fold selectivity. PIPE-791 was screened against 78 targets (Eurofin SAFETYscan) at a concentration of 30 μM with no appreciable activity.

The following figure provides a summary of PIPE-791 *in vitro* radioligand binding and selectivity profile in Ca^{2+} mobilization. We assessed selectivity using a three hour incubation of PIPE-791.

Properties	***In vitro Profile***
Radioligand binding Ki (nM)	0.752 (IC_{50}: 2.63)
K_{off} (min^{-1})	0.001334
Functional LPA1 Ca^{2+} mobilization (nM, 30 minutes)	91.8
Functional LPA1 Ca^{2+} mobilization (nM, 24 hours)	9.9

PIPE-791 Inhibits LPA1-Induced Fibroblast Chemotaxis and Collagen Production In Vitro

The addition of LPA to fibroblasts results in an increase in chemotaxis and collagen production. Both processes are inhibited by antagonists of LPA1R. In a chemotaxis assay using primary human fibroblasts, PIPE-791 inhibited LPA-induced chemotaxis at an IC_{50} of 1.5 nM. In a collagen induction assay, PIPE-791 inhibited LPA-induced collagen production (COL1A1) in primary human lung fibroblasts at an IC_{50} of 1.14 nM.

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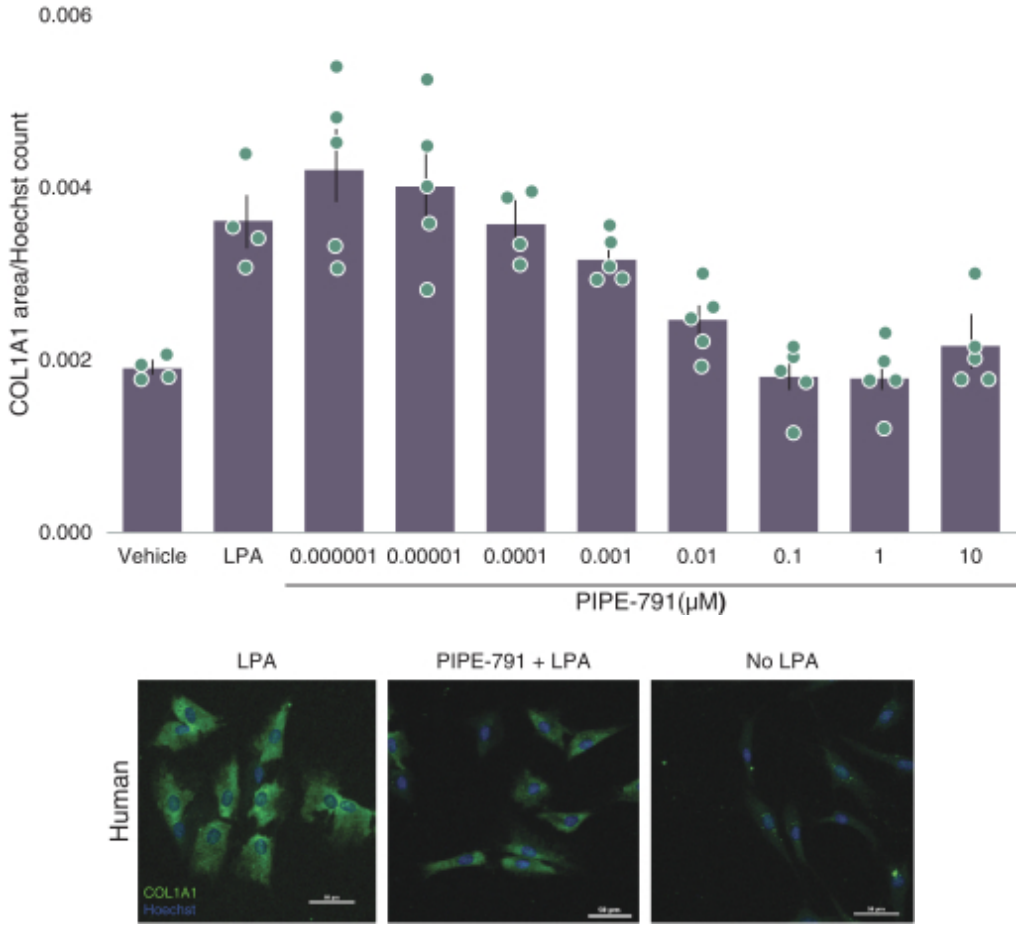
The following figure shows PIPE-791 inhibits LPA1-induced collagen production in human fibroblasts.

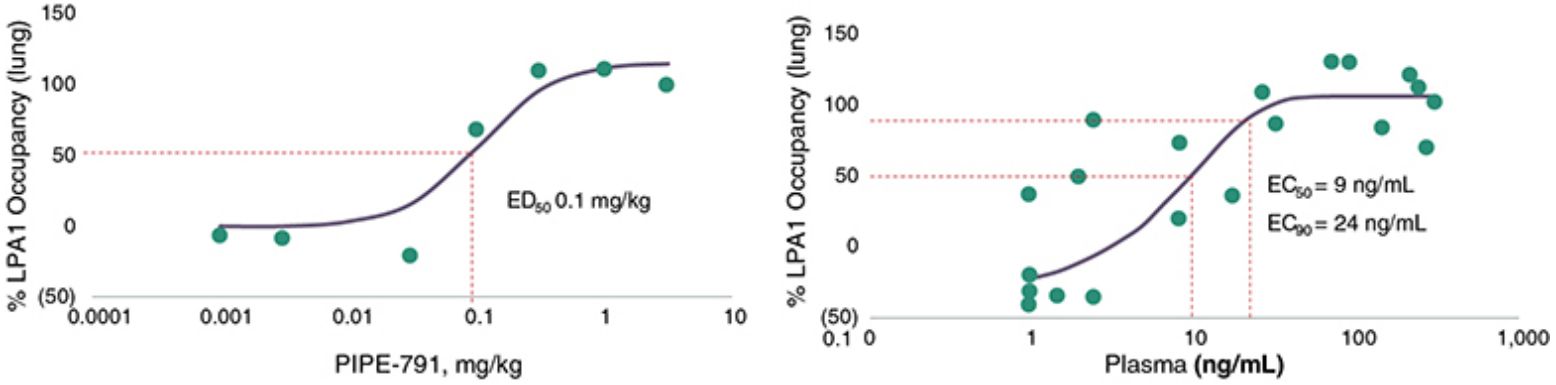


PIPE-791 In Vivo Lung LPA1R Occupancy

We evaluated the *in vivo* receptor occupancy of PIPE-791 using a novel selective LPA1 radioligand [^{3}H]-PIPE-497. We dosed PIPE-791 orally, QD for four days in order to approximate binding at steady state coverage and to account for the slow kinetics of PIPE-791 binding observed with *in vitro* binding assays.

We demonstrated that PIPE-791 dose-dependently inhibits radioligand binding with a half maximal dosing effect (ED_{50}) of 0.1 mg/kg. We determined the corresponding plasma concentration and 90% maximal effect (EC_{90}) to be 9 ng/mL and 24 ng/mL, respectively. Correcting for plasma protein binding in rodents (96.6%), we estimated that the resulting unbound EC_{50} is 0.30 ng/mL (0.7nM), consistent with the *in vitro* binding affinity 0.75 nM.

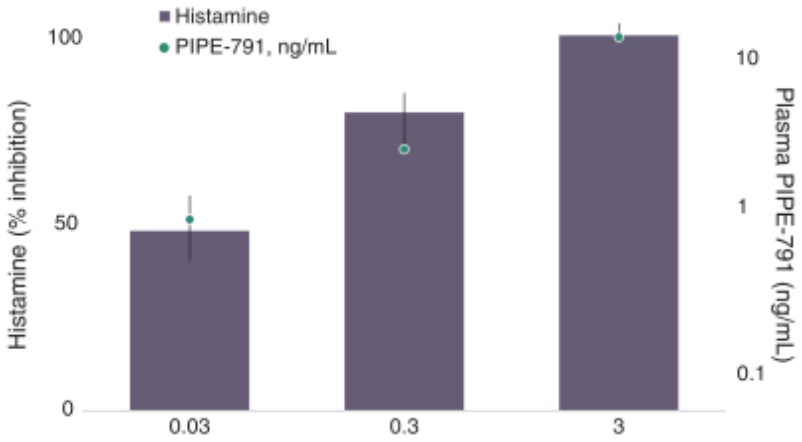
The following figure provides PIPE-791 lung receptor occupancy, including receptor occupancy versus oral dose (left figure) and receptor occupancy versus PIPE-791 plasma concentration (right figure).



PIPE-791 LPA-Induced Histamine Response In Vivo

Intravenous LPA challenge leads to rapid but short-lived increase in plasma histamine. This response has been shown to be LPA1R dependent and, as such, has become widely used as a pharmacodynamic biomarker for LPA1R inhibition. We evaluated PIPE-791 for the ability to inhibit LPA-induced plasma histamine after four days of QD dosing to measure inhibition at steady state coverage. We collected plasma two minutes after LPA challenge. Following multiple days of dosing (to reach steady state coverage), we observed that PIPE-791 dose-dependently inhibited plasma histamine with an ED_{50} of approximately 0.03 mg/kg, and a maximal inhibition at a dose level of 3 mg/kg with corresponding plasma concentrations of 15 ng/ml. These pharmacodynamic results show PIPE-791 provides sustained, 24 hour, LPA1R inhibition at low plasma concentrations with a QD dosing paradigm.

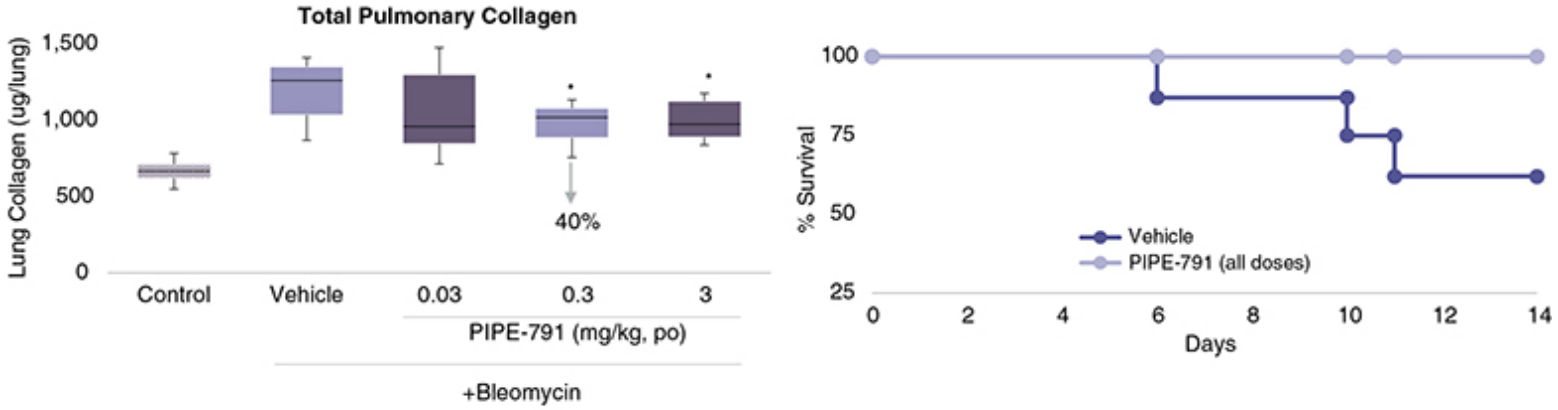
The following figure shows that PIPE-791 inhibits LPA-induced plasma histamine release.



In Vivo Lung Fibrosis Model

We evaluated the ability of PIPE-791 across multiple doses to reduce fibrosis in response to injury in a rodent bleomycin-induced lung fibrosis model, a standard animal model of IPF. Rodents received bleomycin sulphate (Blenoxane, 3.0 units/kg) via oropharyngeal instillation. Treatment of these rodents with PIPE-791 increased overall survival and led to a dose-dependent decrease in lung tissue fibrosis evaluated 14 days following bleomycin instillation. Body weights also improved with PIPE-791.

The following figures show PIPE-791 is active in the bleomycin model, including total lung collagen (left figure) and survival (right figure).



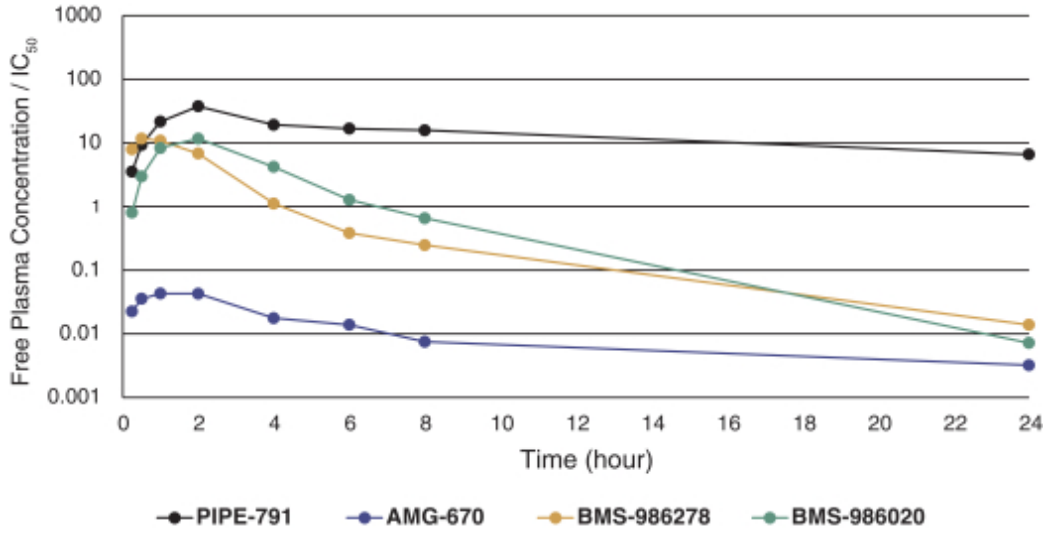
*p<0.05 versus vehicle; one-way ANOVA followed by Dunnett's post hoc comparisons

Preclinical Data Comparison Between PIPE-791 and Other LPA1R Antagonists

We believe that our preclinical studies and Phase 1 healthy volunteer data support the continued development of PIPE-791 for both IPF and Progressive MS. Specifically, with regard to its high bioavailability, low plasma protein binding, and long receptor residence time in our preclinical studies compared to the preclinical data of other LPA1R antagonists that we know are currently in development, we also believe PIPE-791 has the potential to be a differentiated LPA1R therapy. We designed PIPE-791 to block the LPA1R while avoiding inhibition of BSEP, the transporter involved in hepatobiliary toxicity associated with previous LPA1R compounds, such as BMS-986020. BMS-986020 is a first generation LPA1R antagonist which has been observed in third-party preclinical studies to elicit hepatobiliary toxicity due to inhibition of BSEP at its expected clinically efficacious dose of 600 mg BID. In third-party preclinical studies, the resulting cholestatic hepatotoxicity of BMS-986020 was recapitulated *in vitro* through a Sandwich-Cultured Human Hepatocyte (SCHH) assay (68% at 10 μM). Given the low anticipated efficacious clinical dose of PIPE-791 (<10 mg QD), its minimal inhibition of the bile acid transporters (i.e. BSEP IC50 $\geq$ 20 μM) *in vitro*, and the lack of any observable general or cholestatic toxicity signal in the SCHH assay (0% at 30 μM), we believe the risk of similar hepatobiliary toxicity in the clinic with PIPE-791 is low.

We also designed PIPE-791 to have high oral bioavailability, high metabolic stability, low plasma protein binding, as well as low nanomolar functional inhibitory activity against LPA1R. Preclinically, these features combine to allow PIPE-791 to achieve high occupancy of the LPA1R for more than 24 hours after a single oral dose. To enable the head-to-head comparison of PIPE-791 against known third-party compounds, we used fold of free plasma drug concentration over *in vitro* LPA1R functional IC_{50} after a single oral dose of 10 mg/kg in rodents as a quantitative measurement of LPA1R target engagement *in vivo across* time. We observed that PIPE-791 is, capable of fully covering the LPA1R receptor IC_{50} across 24 hours. Under the same conditions in our preclinical comparison studies, none of the other LPA1 receptor antagonists achieved 24-hour coverage above their respective IC_{50}.

The following figure represents the time of free plasma concentrations over IC_{50} for each respective LPA1 receptor antagonist in our preclinical studies. Values greater than 1 on the y-axis represent plasma concentrations that exceed the IC_{50}; whereas, values less than 1 represent plasma concentrations below the IC_{50}.



We also assessed the key parameters for these compounds head-to-head in both *in vitro* and *in vivo* experiments. The following table compares the *in vitro* binding and *in vivo* absorption properties of PIPE-791 with the other LPA1 receptor antagonists, including: i) calcium mobilization IC50 using cells expressing human LPA1R; ii) plasma protein binding using rodent plasma; and iii) oral bioavailability in rodents following a single oral dose of 10 mg/kg formulated in 1% hydroxypropyl methyl cellulose with 0.1% TWEEN80, a polyethylene sorbitol ester, and an intravenous bolus dose of 2 mg/kg formulated in 60% PEG400 and 40% water. The free acid form was used for each compound.

Assays	PIPE-791	BMS-986278	BMS-986020	AMG-670
hLPA (Ca^{2+} flux) IC_{50}	9.9 nM	80 nM	2.0 nM	9.2 nM
Plasma protein binding, % Free (Rodent)	5.7	15	0.2	0.07
Oral bioavailability, *F (%)	78	138	64	4.7

*Fraction absorbed

Clinical Development Plan of PIPE-791 in IPF

Based on the favorable safety results from our recently completed Phase 1 healthy volunteer trial, we plan to submit a CTA to the MHRA in 2024 to commence a single-center Phase 1b open-label trial of PIPE-791 in IPF to measure the relationship of PK and lung receptor occupancy by PET imaging. We will design this trial to inform dose selection for a planned future Phase 2 trial in IPF. We expect to submit an IND to the FDA to support the planned Phase 2 trial in IPF in 2025 following completion of the planned six-month rodent and nine-month minipig GLP toxicity studies. Subject to the FDA's review and authorization of our IND, we plan to commence a proof-of-concept multi-center Phase 2 randomized double-blind, placebo-controlled safety trial in patients with IPF. The proposed primary endpoint will be to assess the rate of change in FVC from baseline to six months.

Our PIPE-791 Development in Progressive MS

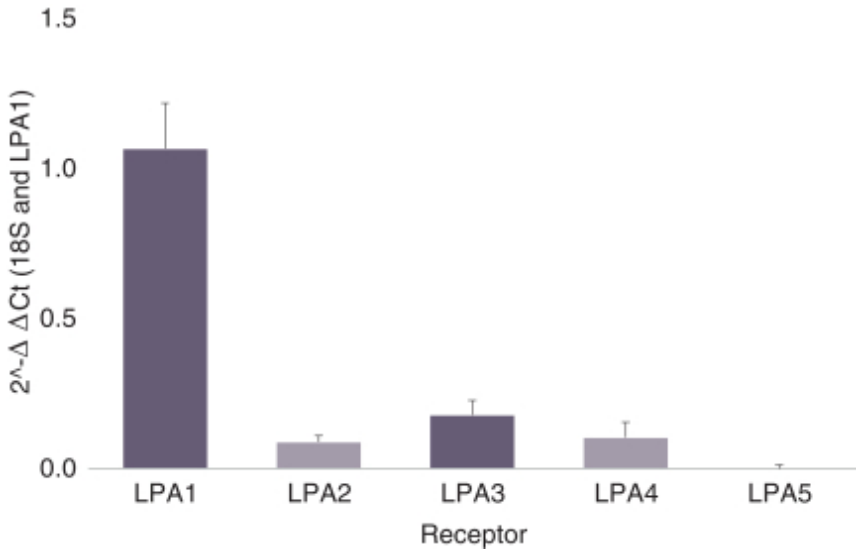
Overview of PIPE-791 Preclinical Proof-of-Concept Studies

PIPE-791 is a novel, high affinity, orally available, brain penetrant, small molecule LPA1R antagonist that we believe can be disease modifying by addressing chronic demyelination and neuroinflammation, the two leading pathological contributors in Progressive MS. In our preclinical studies, we have demonstrated that PIPE-791 induces OPC differentiation into oligodendrocytes and enhanced survival of oligodendrocytes in the presence of inflammatory cytokines. In our preclinical studies, we observed that LPA1R antagonism reverses immune-mediated neuroinflammation and promotes remyelination in *in vivo* and *in vitro* MS models. PIPE-791 also reduced the cytokine response in an acute lipopolysaccharide (LPS) challenge model of neuroinflammation, a model widely used to induce both neuro-and peripheral inflammation. Further, our *in vivo* binding studies confirm prolonged receptor association that resulted in durable CNS receptor occupancy. Together, these results offer a compelling rationale for the further development of PIPE-791 as a potential treatment for Progressive MS, as well as MS more broadly.

LPA1R Expression is Enriched in OPCs Compared to Other Isoforms In Vitro

We have independently demonstrated enriched LPA1R expression in OPCs, as reported by earlier studies. We isolated OPCs from rodent cortex and then assayed the LPA1-5 receptors by quantitative polymerase chain reaction (PCR). In addition to confirming the presence of LPA1, we observed that LPA2-5 mRNA expression levels were significantly lower in OPCs.

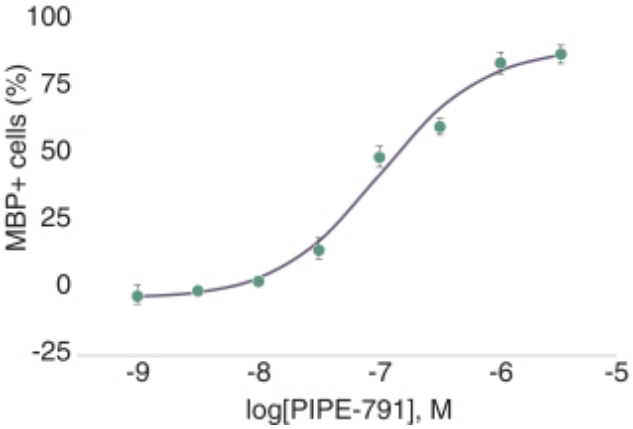
The following figure provides evidence that LPA1 expression is enriched compared to other isoforms on OPC.

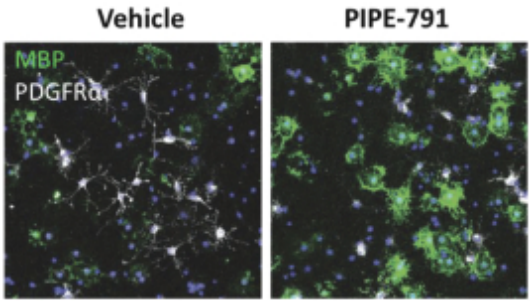


PIPE-791 Induced Rodent OPC Differentiation In Vitro

We isolated and cultured primary rodent OPCs in the presence of platelet-derived growth factor (PDGFα), which promotes survival and initiates proliferation. Following PDGFα removal, we added various concentrations of PIPE-791 to the cultures and maintained the cultures for three days. We then immunostained these cultures for myelin basic protein (MBP), which is a marker for differentiated OPCs or oligodendrocytes. Following PIPE-791 treatment, we observed a concentration dependent increase in the number of oligodendrocytes. The concentration to produce an EC_{50} was estimated to be 108 nM, demonstrating the role of PIPE-791 has in promoting OPC differentiation.

The following figures show PIPE-791 induced OPC differentiation into oligodendrocytes, including the PIPE-791 concentration response curve (left figure) and the immunostaining for MBP (right figures).





PIPE-791 Induced Remyelination in Rodent Organotypic Brain Slice Culture

We next used an *ex vivo* organotypic brain culture to assess the effect of PIPE-791 in remyelination following a demyelinating insult. We treated rodent cortical brain slices with lysolecithin, which induces acute demyelination through a non-specific lipid-based mechanism. We removed the lysolecithin 18 hours later and replaced it with media containing PIPE-791. After three additional days of incubation, we processed the brain slices for immunostaining against MBP. We quantified the MBP+ area and observed a dose-dependent increase following PIPE-791 treatment with an EC_{50} of 74 nM.

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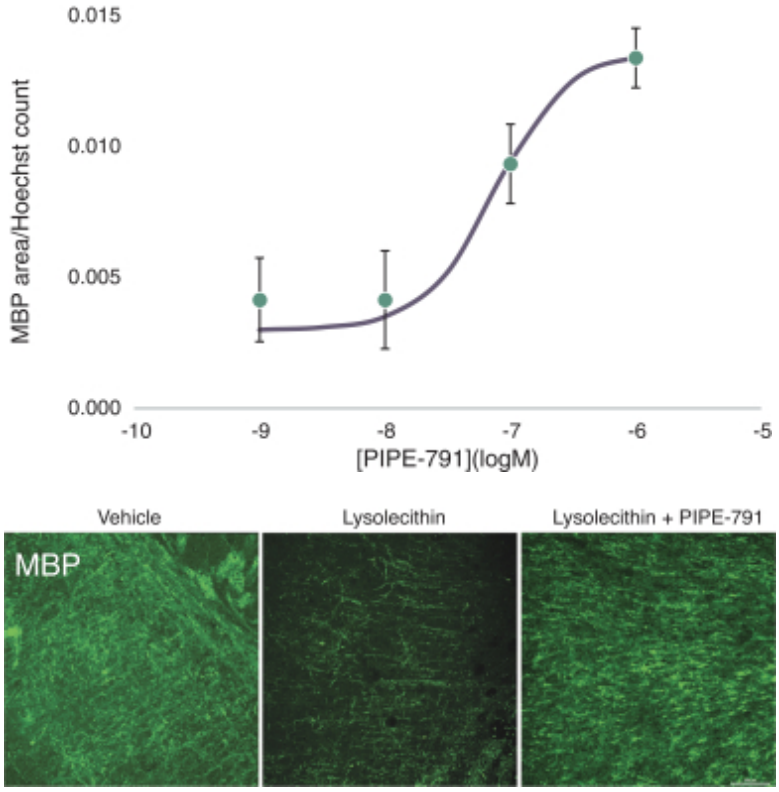
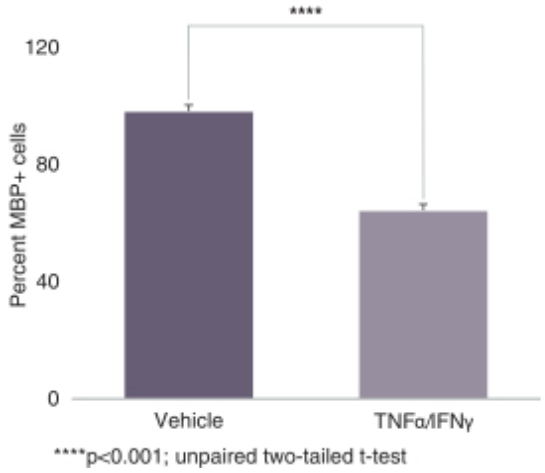
The following figures show PIPE-791 increased remyelination in an *ex vivo* organotypic brain culture assay, including the PIPE-791 concentration response curve (top figure) and the immunostaining for MBP (bottom figures).

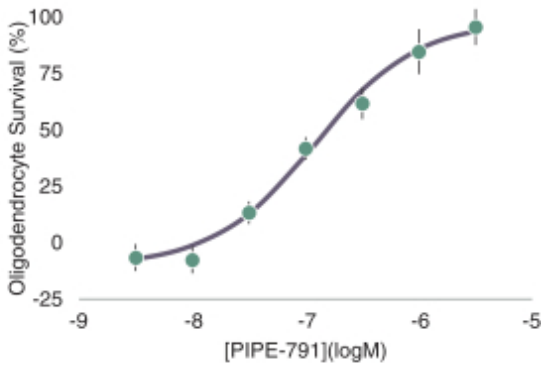


PIPE-791 Promoted Oligodendrocyte Survival In Vitro

TNFα and IFNγ are two cytokines that, while not normally expressed in the CNS, are elevated in MS. These cytokines can be secreted by both macrophages and microglia. Upon addition of these cytokines, we observed significant cell death consistent with previous observations. To test whether PIPE-791 could afford protection after cytokine insult, cells that were treated with TNFα and IFNγ were also treated with various concentrations of PIPE-791. In the presence of PIPE-791, we observed dose-dependent protection of MBP+ oligodendrocytes with an EC_{50} of 119 nM. We believe these results suggest that PIPE-791 promotes oligodendrocyte survival in addition to differentiation in the context of an inflammatory microenvironment.

The following figures show a 35% decrease in viability of oligodendrocytes in response to TNFα and IFNγ (left figure) and that the addition of PIPE-791 prevented oligodendrocyte death in a dose-responsive manner (right figure).

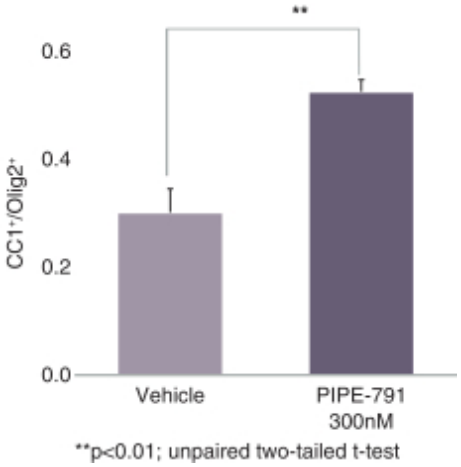


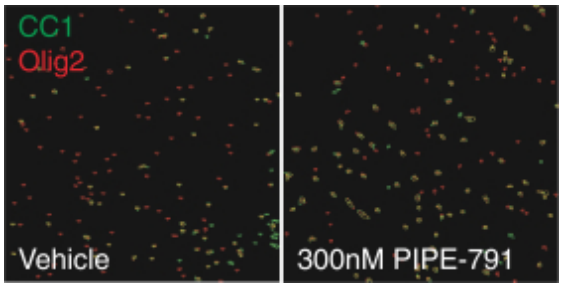


PIPE-791 Induces Differentiation of OPCs into Oligodendrocytes in Human Organotypic Brain Slice Culture

Our preclinical *in vitro* studies have demonstrated PIPE-791's robust LPA1R antagonism and its ability to promote differentiation of rodent OPCs into oligodendrocytes. To assess whether we could demonstrate a similar effect in human OPCs, we evaluated oligodendrocyte markers in human cortical slice cultures after treatment with PIPE-791. We generated cortical slices from regions containing both white and gray matter from healthy human adult donor tissue and cultured them for ten days. We then added PIPE-791 to the culture for nine days. We processed the brain slices by immunostaining for CC1+ cells, a marker for mature oligodendrocytes. We observed an increase in CC1+ cells suggesting that PIPE-791 has the potential to induce OPC differentiation in a human setting.

The following figures show PIPE-791 induced oligodendrocytes in human cortical slice cultures, including the number of CC1+ cells in both vehicle and cultures treated with PIPE-791 (left figure) and representative images of slices stained with CC1 (green) in both vehicle and cultures treated with PIPE-791 (right figures).





PIPE-791 Inhibits LPA-Induced Microglia Activation In Vitro

LPA is elevated during MS and may participate in microglial activation. LPA-activated microglia are inflammatory and release cytokines, such as TNFα and IL-1. Because these cytokines may exacerbate damage and impede remyelination, inhibiting such proinflammatory microglial activation may promote repair. We evaluated PIPE-791 in an *ex vivo* microglial activation assay using LPA challenge. We observed that PIPE-791 significantly inhibited LPA-induced changes in IBA1+ microglia morphology, a hallmark of activation.

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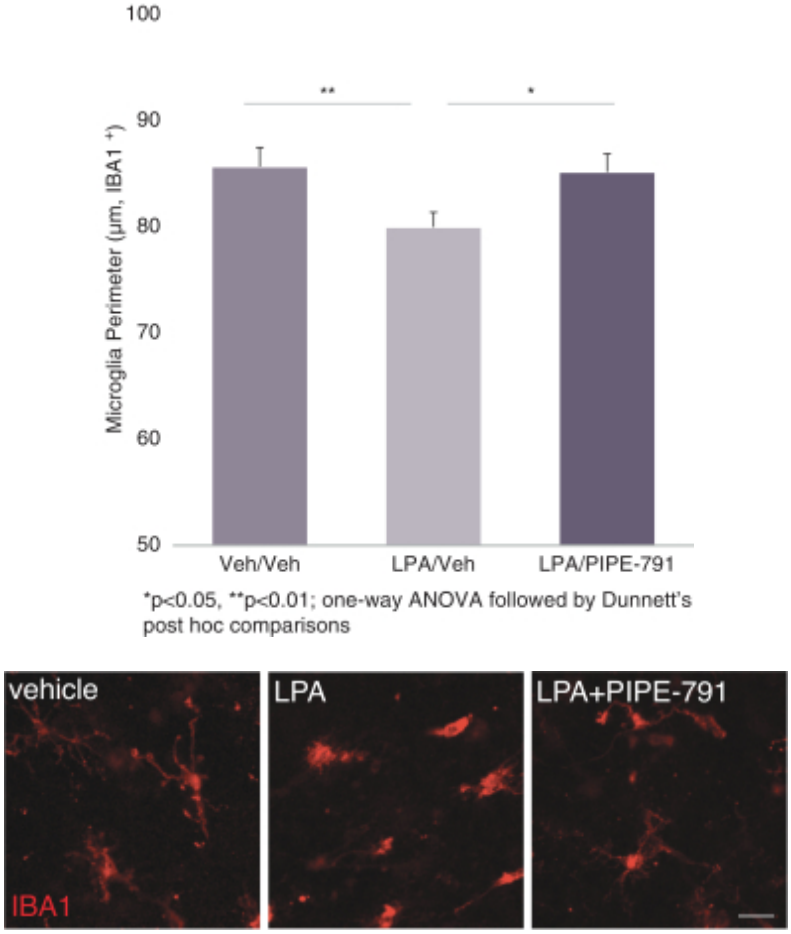
The following figures show that PIPE-791 inhibited LPA-induced microglia activation including the quantification of the microglia activation in the various treated mediums (top figure) and immunostaining for IBA1 in the various treated mediums (bottom figures).

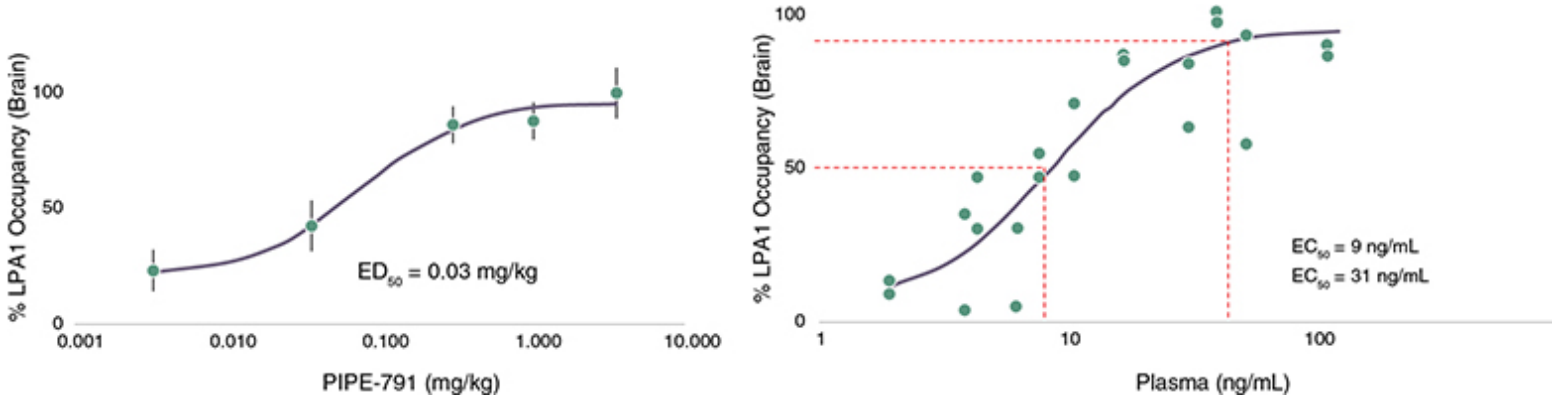


PIPE-791 In Vivo CNS LPA1R Occupancy

We evaluated the *in vivo* receptor occupancy of PIPE-791 using a novel selective LPA1 radioligand, [^{3}H]-PIPE-497, in rodents. In order to both approximate binding at steady state and account for the specific kinetics of PIPE-791 binding observed with *in vitro* assays, we evaluated occupancy after four days of QD oral administration of PIPE-791.

PIPE-791 dose-dependently inhibited radioligand binding with an ED_{50} of 0.03 mg/kg. The corresponding plasma EC_{50} and EC_{90} were determined to be 9 ng/mL (19 nM) and 31 ng/mL (65 nM), respectively. Correcting for plasma protein binding in rodent (96.6%), the resulting unbound EC_{50} is estimated to be 0.7 nM. We use these data to understand PK and therapeutic human dosing implications.

The following figures show PIPE-791 CNS receptor occupancy, including receptor occupancy versus oral dose (left figure) and receptor occupancy versus PIPE-791 plasma concentration (right figure).

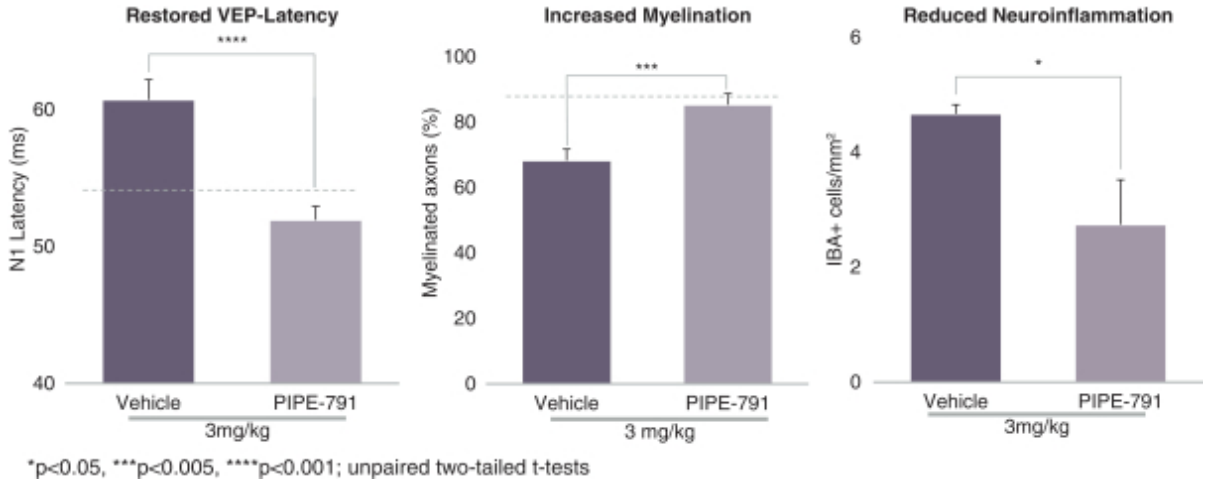


PIPE-791 Promotes Remyelination, Restores VEP Latency, and Reduces Neuroinflammation in In Vivo MS Rodent Model

We demonstrate the ability of PIPE-791 to promote remyelination, inhibit neuroinflammation, and restore neuronal function *in vivo* in a rodent experimental autoimmune encephalomyelitis (EAE) model of inflammatory demyelination, a model in which the interaction between a variety of immunopathological and neuropathological mechanisms leads to an approximation of the key pathological features of MS: inflammation, demyelination, and axonal loss. We immunized rodents with a peptide corresponding to an epitope on myelin oligodendrocyte glycoprotein (MOG).

After approximately nine days, rodents developed EAE followed by motor impairment. Treatment of these rodents with 3 mg/kg of PIPE-791 led to a statistically significant increase in the percentage of myelinated axons in the optic nerve versus vehicle treated rodents ($p<0.005$; unpaired t-test). PIPE-791 treatment also led to a restoration in VEP latency ($p<0.001$; unpaired t-test). Further, PIPE-791 reduced neuroinflammation as determined by a decrease in IBA1+ cells ($p<0.05$; unpaired t-test).

The following figures show that PIPE-791 led to statistically significant improvements in the MOG EAE model as measured by VEP latency, axonal myelination, and reduced neuroinflammation.



*p<0.05, ***p<0.005, ****p<0.001; unpaired two-tailed t-tests

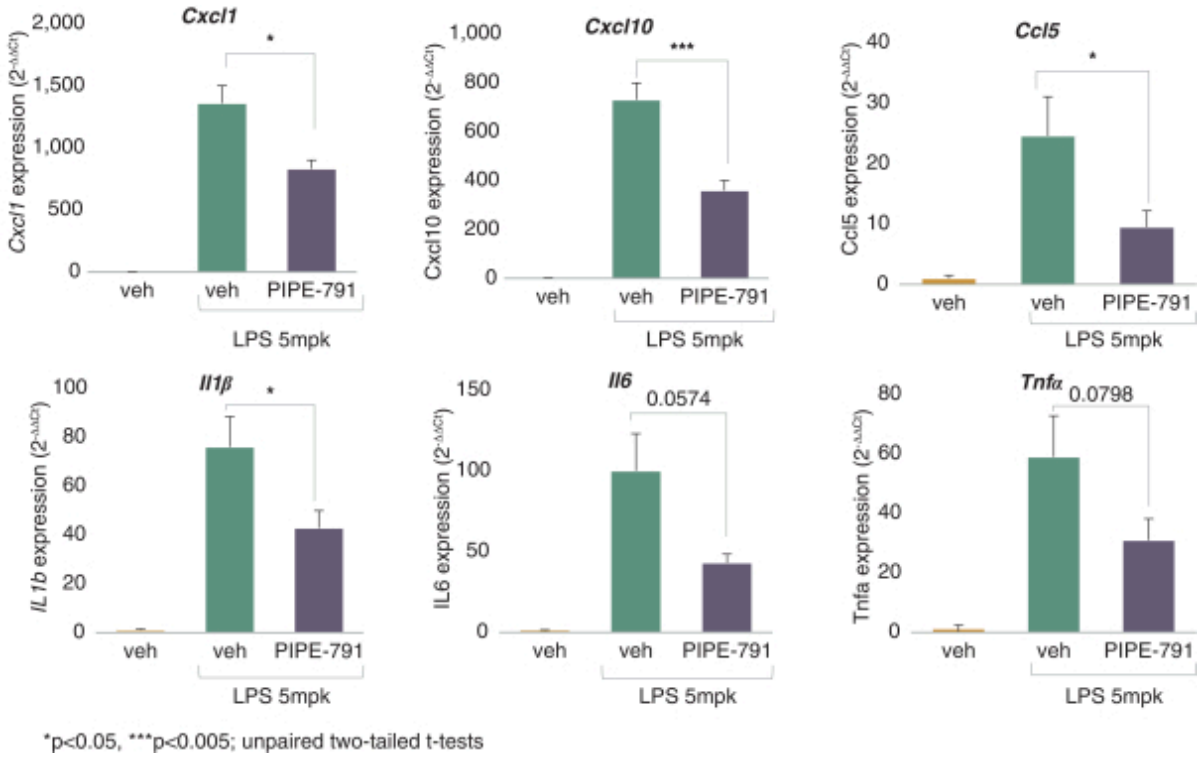
In Vivo LPS-Induced Neuroinflammation Model

In addition to the EAE model results described above, we have also demonstrated the ability of PIPE-791 to reduce neuroinflammation in a rodent LPS challenge model.

We administered a single oral dose of PIPE-791 to rodents at 3 mg/kg two hours prior to an injection of LPS. Two hours later, we dissected forebrains and measured cytokine levels by quantitative PCR to assess neuroinflammation.

LPS induced expression of a broad range of neuroinflammatory cytokines including chemokines (C*xcl1*, C*xcl10*, C*cl5*), interleukins (I*l1*β, I*IL6*), and interferons (T*nf*α). PIPE-791 significantly reduced expression of C*xcl1*, C*xcl10*, C*cl5* and I*l1*β (p<0.05; unpaired t-tests). I*l6* and T*nf*α expressions were also reduced, however statistical significance was not reached.

The following figures show the reduction of PIPE-791 on LPS induced CNS cytokine expression.



*p<0.05, ***p<0.005; unpaired two-tailed t-tests

Clinical Development Plan of PIPE-791 in Progressive MS

Based on the favorable safety results from our recently completed Phase 1 healthy volunteer trial, we plan to submit a CTA to the MHRA in 2024 to commence a single-center Phase 1b open-label trial of PIPE-791 in Progressive MS to measure the relationship of PK and brain receptor occupancy by PET imaging. We will design this trial to inform dose selection for a planned future Phase 2 trial in Progressive MS. We expect to submit an IND to the FDA to support the planned Phase 2 trial in Progressive MS in 2025 following completion of the planned six-month rodent and nine-month minipig GLP toxicity studies for PIPE-791. Subject to the FDA's review and authorization of our IND, we plan to commence a proof-of-concept Phase 2 trial of PIPE-791 for Progressive MS to explore evidence of remyelination and reduction in neuroinflammation.

CTX-343

Our CTX-343 Development for Peripheral Fibrotic Disease

Overview of CTX-343 Preclinical *In Vitro* and *In Vivo* Characterization

We based our decision to nominate CTX-343 as a development candidate based on its pharmacodynamic properties assessed in our *in vitro* pharmacology and *in vivo* preclinical studies.

CTX-343 is a Potent LPA1R Antagonist In Vitro

We tested CTX-343 in a competitive membrane filter binding assay using membranes from cells overexpressing human LPA1. We found that CTX-343 bound human LPA1R with low double-digit nanomolar potency with half maximal inhibitory concentration (IC_{50}). We also tested CTX-343 in a functional calcium (Ca^{2+}) mobilization assay using 24-hour pre-incubation periods prior to LPA addition. The IC_{50} was 48.1 nM. Additionally, we screened CTX-343 against 78 targets (Eurofin SAFETYscan) at a concentration of 30 μM with no appreciable activity.

CTX-343 is an Orally Bioavailable and Peripherally-Restricted LPA1R Antagonist In Vivo

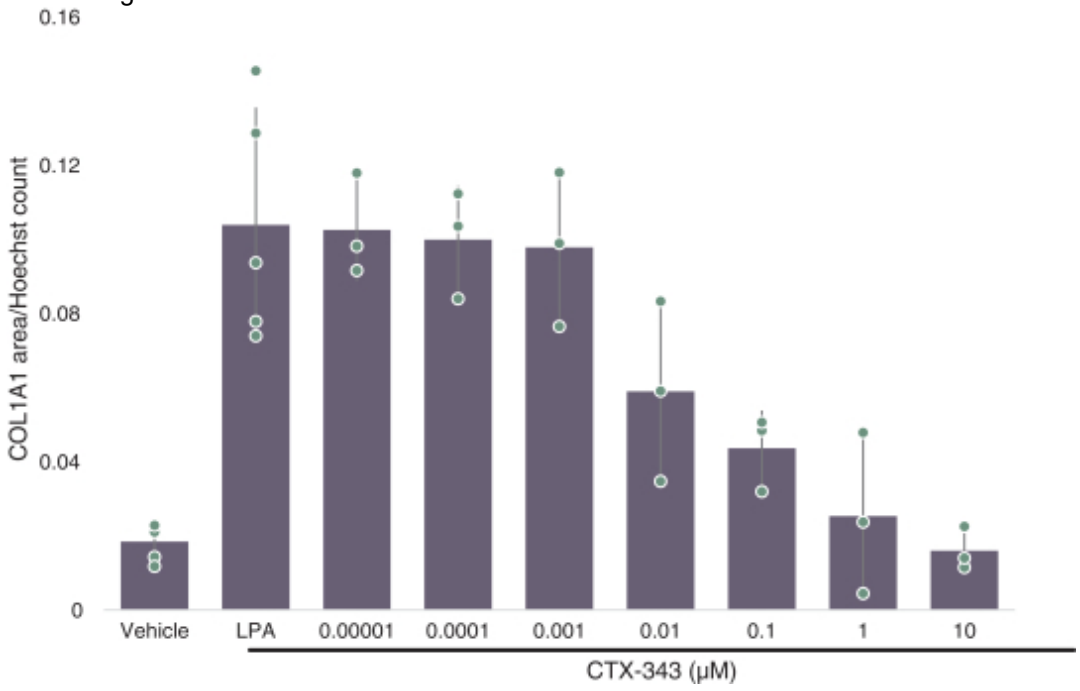
CTX-343, when administered orally to Sprague-Dawley rats, exhibited a high oral bioavailability of 105% and a low plasma-protein corrected intrinsic clearance from plasma of 14.9 mL/min/kg. We also determined that CTX-343 was peripherally-restricted, with an unbound brain to unbound plasma partitioning coefficient ($K_{p,uu}$) of 0.05.

The following table provides a summary of CTX-343's *in vitro* radioligand binding and Ca^{2+} mobilization profile, as well as its *in vivo* unbound brain to unbound plasma partitioning coefficient.

Properties	***Profile***
Radioligand binding K_i (nM)	5.56 (IC_{50}: 19.5)
K_{off} (min^{-1})	0.00036
Functional LPA1 Ca^{2+} mobilization (nM)	48.1
Rodent $K_{p,uu}$ @ 2 h	0.05

CTX-343 Inhibits LPA1-Induced Fibroblast Collagen Production In Vitro

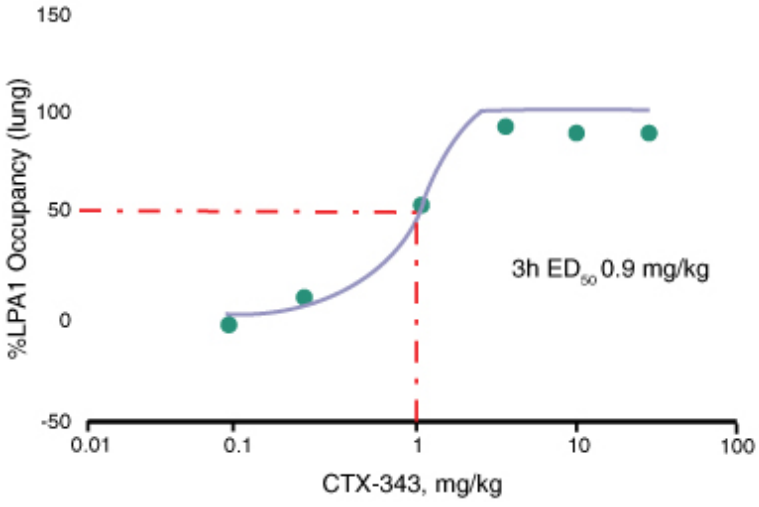
The addition of LPA to fibroblasts results in an increase in collagen production. In a collagen induction assay, CTX-343 inhibited LPA-induced COL1A1 in primary human lung fibroblasts at an IC_{50} of 10.2 nM. The following figure shows CTX-343 inhibits LPA1-induced collagen production in human lung fibroblasts.

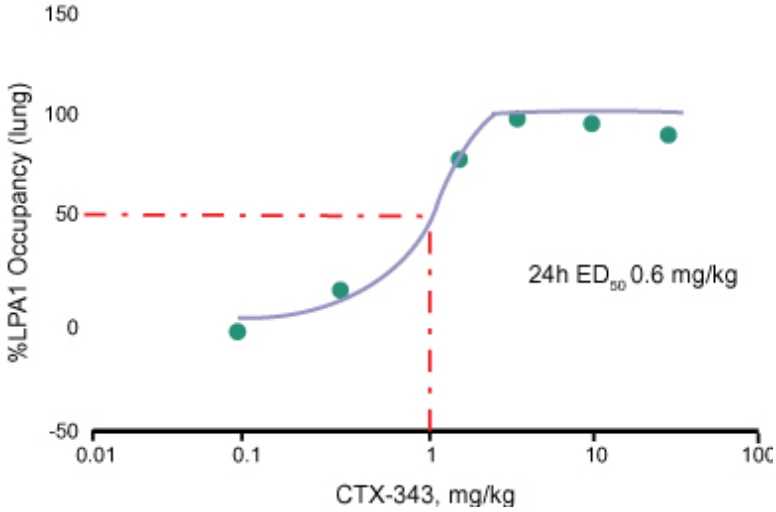


CTX-343 In Vivo Lung LPA1R Occupancy

We evaluated the in vivo receptor occupancy of CTX-343 in mouse, three- and 24-hours after a single oral dose. We demonstrated that CTX-343 dose-dependently inhibits radioligand binding with a half maximal dosing effect (ED_{50}) of 0.9 and 0.6 mg/kg at three- and 24-hours post oral dosing, respectively.

The following figure provides CTX-343's lung receptor occupancy versus oral dose at three hours (left figure) and 24 hours (right figure).





Preclinical Assessment of CTX-343 for Risk of Cholestatic Hepatotoxicity

We evaluated the potential of CTX-343 to elicit general and cholestatic hepatotoxicity in vitro in a Sandwich-Cultured Human Hepatocyte (SCHH) assay. At a concentration of 100 μM, there was a notable absence of any toxicity signal.

Clinical Development Plan of CTX-343 for Peripheral Fibrotic Disease

We intend to conduct additional preclinical studies to support selection of a clinical indication for CTX-343. Thereafter, subject to successful IND-enabling activities, we plan to file an IND with the FDA for CTX-343 in 2025 and, pending authorization, we plan to initiate a Phase 1 trial of CTX-343 in healthy volunteers that same year.

PIPE-307

PIPE-307 is a novel, small molecule, selective inhibitor of M1R that we are developing in collaboration with J&J for the potential treatment of depression and RRMS. We have completed two Phase 1 trials of PIPE-307 in healthy volunteers, 1) a Phase 1 SAD/MAD trial, and 2) a Phase 1 PET trial. The results of these Phase 1 trials, which support future clinical development of PIPE-307 for both depression and RRMS, are summarized below. We have received IND clearance from the FDA to conduct a Phase 2 trial in RRMS.

In February 2023, we entered into the J&J License Agreement, under which we granted J&J an exclusive, worldwide license to develop, manufacture and commercialize PIPE-307 in all indications. We are conducting a Phase 2 trial of PIPE-307 for the potential treatment of RRMS, which initiated in November 2023. In addition, we have an opt-in right to fund a portion of all Phase 3 development costs in return for an increase in royalty rates by one to two percentage points. PIPE-307 is also in development for the potential treatment of depression, for which J&J plans to initiate a Phase 2 trial in 2024.

PIPE-307 for the Potential Treatment of Depression

Disease Background

Depression is one of the most common mood disorders with approximately 280 million people globally and nearly 20% of U.S. adults suffering from the disorder. Depression is associated with significant neuropsychiatric disability and increased mortality risk and is characterized by persistently low or depressed mood, anhedonia or decreased interest in pleasurable activities, feelings of guilt or worthlessness, lack of energy, poor concentration, appetite changes, psychomotor retardation or agitation, sleep disturbances, intense euphoria, high energy, uncontrolled impulsive behaviors or suicidal thoughts or a combination of these.

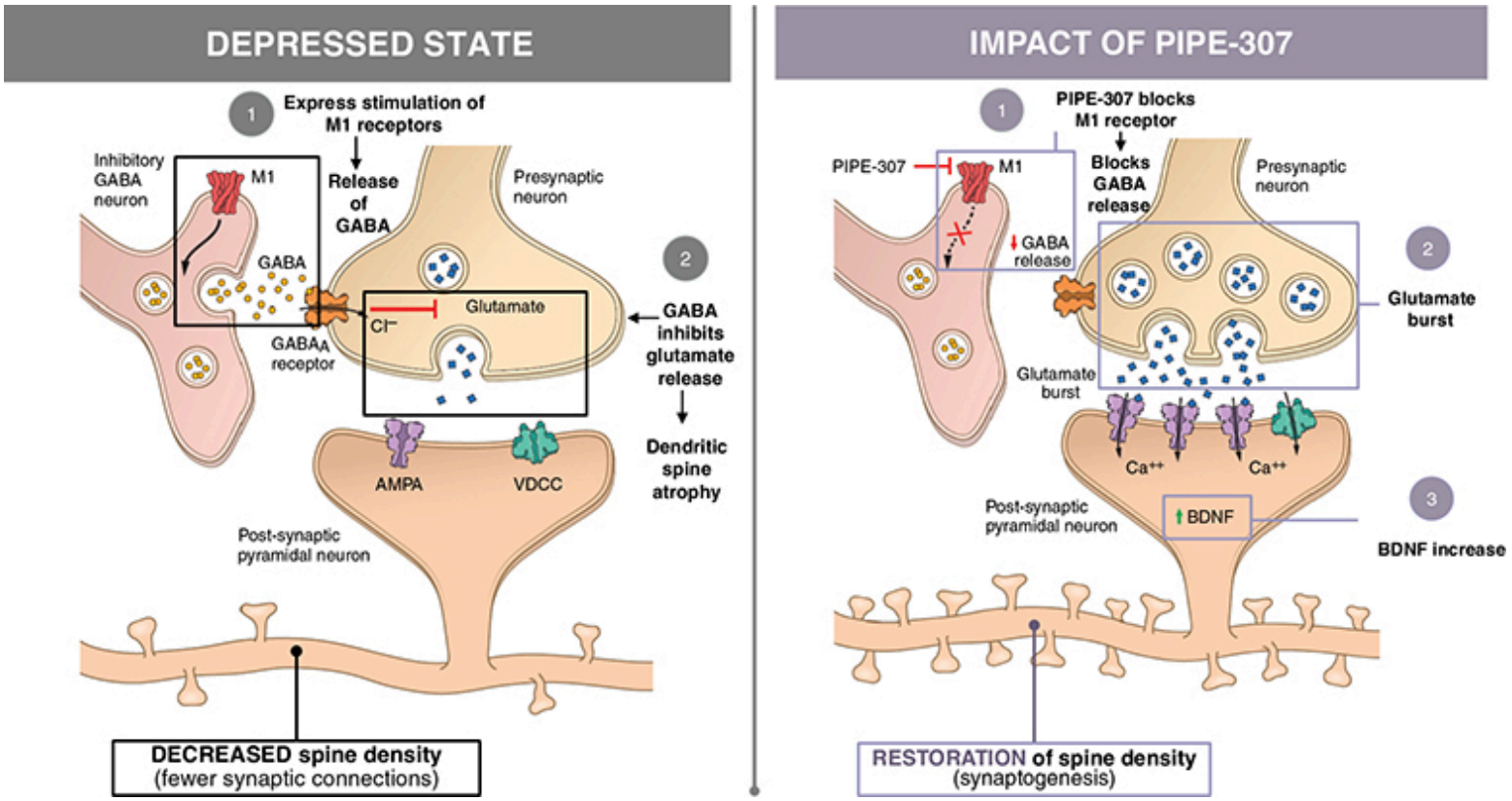
Current Approved Therapies

Despite numerous approved treatments, there remains a significant unmet medical need in the treatment of depression. Currently approved therapies include antidepressant drugs such as selective serotonin reuptake inhibitors, serotonin and norepinephrine reuptake inhibitors, antipsychotics and mood stabilizers. It is well recognized that many patients will fail to respond to current therapies and, in many cases, these treatments are partially effective or not effective at all. Further, patients treated with these therapies often experience pronounced side effects, such as weight gain, sexual dysfunction, gastrointestinal issues and emotional blunting.

Scientific Rationale for M1R Antagonism in Depression

The cholinergic neurotransmitter system was first implicated in the pathophysiology of depression in the early 1970s. Centrally active anticholinergic drugs, such as those used to treat Parkinson's disease, have been reported to cause feelings of euphoria with a sense of well-being, and treatment with non-selective muscarinic antagonists blocked the depressive effects of physostigmine. More recently, repeated treatment with intravenous scopolamine resulted in rapid and robust antidepressant responses in patients with MDD and BPD. The non-specific anti-cholinergic properties of scopolamine lead to tolerability issues that are contraindicative in the setting of depression. In addition, two small studies found efficacy of adjunctive oral scopolamine compared to placebo when added to citalopram or naltrexone for the treatment of MDD. Combined, these data suggest that anticholinergic drugs may be useful as a treatment for mood disorders. Although scopolamine is a non-selective antagonist of all five muscarinic receptors (M1 through M5), its antidepressive effects are mediated by the M1R isoform as evidenced by gene knockout and pharmacological data. The proposed mechanism involves M1R-dependent synaptogenesis in pyramidal neurons in the prefrontal cortex. This effect is directed by blocking M1Rs located on inhibitory GABA neurons which, in turn, promotes excitatory transmission leading to increased brain-derived neurotrophic factor (BDNF) release and dendritic spine formation.

The following figure shows the proposed mechanism of action and resulting action of PIPE-307 in depression.



PIPE-307 for the Potential Treatment of RRMS

We are also developing, in collaboration with J&J, PIPE-307 for the potential treatment of RRMS, the most common form of MS. While there are numerous treatments indicated for RRMS, none directly address the therapeutic goal of supporting remyelination. We believe that PIPE-307 has the potential to address one of the leading causes of long-term neurodegeneration by promoting remyelination. Based on the results of preclinical studies, as well as clinical proof-of-concept established in a Phase 2 trial performed by a third party with clemastine, we believe there is a strong rationale for clinical development of PIPE-307 in RRMS.

Disease Background

MS is a chronic, immune mediated disease of the CNS characterized by demyelination and neuroinflammation which ultimately result in axonal loss and clinical disability. Effective treatments for the progressive neurodegeneration in MS remain one of the largest unmet needs for the nearly 1 million patients in the United States and estimated 2.8 million globally living with this disorder in 2020.

RRMS comprises roughly 85% of newly diagnosed MS patients. The clinical course is marked by relapses and remissions with generally no significant progression between relapses. While current treatments for RRMS patients focus on suppressing the immune system to limit inflammation and further loss of the myelin sheath, there are no approved therapies that effectively or directly promote remyelination to mitigate the progressive disability associated with chronic demyelination.

Current Approved Therapies

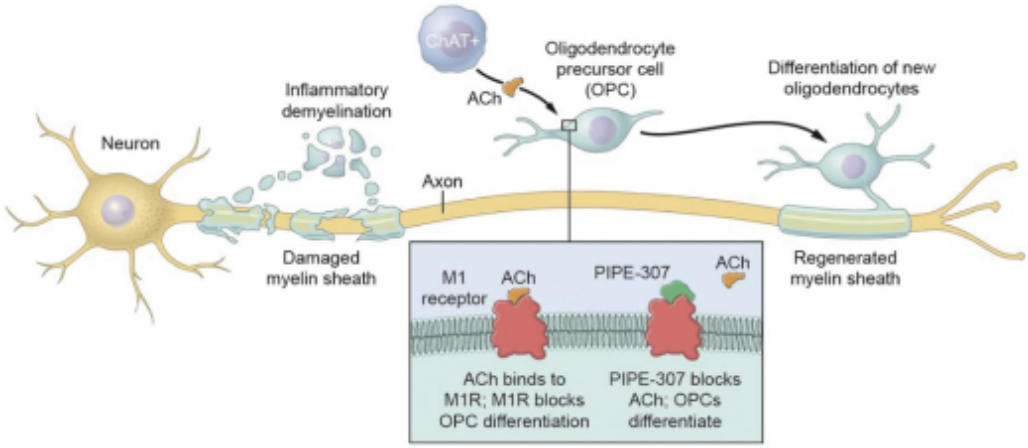
The FDA has approved over twenty DMTs that suppress inflammatory injury and decrease the rate of annual relapses. However, none of these approved therapies, to our knowledge, directly remyelinate nerve fibers or avert neuronal degeneration and disability related to chronic demyelination. We believe that remyelination will address one of the primary pathological aspects of MS that is not addressed by immune-modulatory therapies.

Scientific Rationale for Remyelination and M1R Antagonism in RRMS

Remyelination has been proposed as one of the most promising approaches to prevent accumulating permanent disability in demyelinating diseases such as MS. Remyelination may even reverse the progressive disability associated with axonal dysfunction that occurs secondary to chronic demyelination.

A key disease hallmark in RRMS is reduced remyelination capacity, and molecular pathways that mediate myelination have long been considered promising therapeutic targets. A third party initially noted the remyelinating potential of antimuscarinic compounds as part of an extensive drug screening investigation using a proprietary micropillar platform. The drug screening identified clemastine, an FDA-approved H1 antihistamine and antimuscarinic compound, as a potential candidate to support remyelination. Clemastine was shown to enhance myelination in a rodent EAE model based on a high affinity for the muscarinic receptors, and M1R was ultimately identified as the molecular target for clemastine in OPCs. Clemastine was subsequently evaluated in a double-blind, randomized, placebo-controlled crossover Phase 2 trial in patients with RRMS, referred to as the ReBuild trial. The ReBuild trial results provided the first evidence of remyelination based on improvement in VEP latency. An associated trend for improvement in a visual measure related to contrast sensitivity was also observed consistent with a treatment effect of remyelination. The measure, referred to as low contrast visual acuity, is known to be impaired in MS patients as compared to age-matched healthy controls. Unfortunately, the side effect profile related to the blocking of the H1 receptor by clemastine prevents further dose escalation studies due to the narrow therapeutic window.

We believe that the results of this Phase 2 trial demonstrate proof-of-concept for M1R antagonism and remyelination in RRMS patients. The following figure shows the proposed mechanism of action and resulting action of PIPE-307 in RRMS.



Summary of PIPE-307 Completed Phase 1 Healthy Volunteer Trials to Support Development in Depression and RRMS

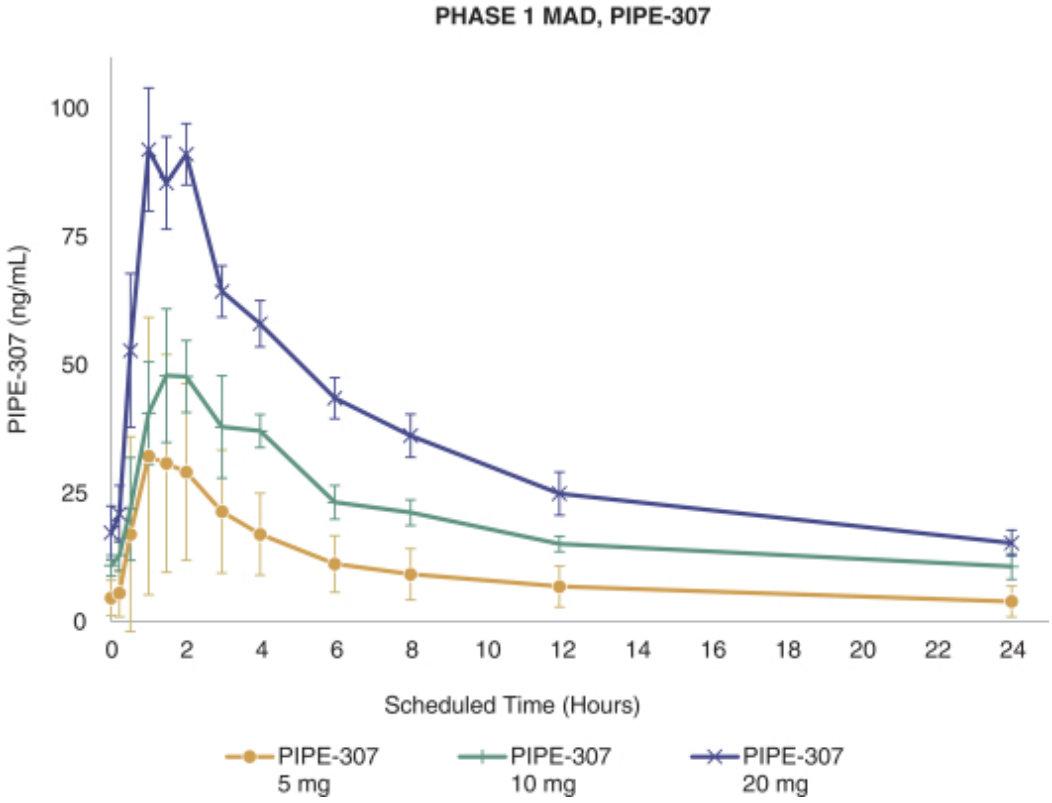
Phase 1 Healthy Volunteer SAD and MAD Trial

We have conducted a Phase 1, randomized, double-blind, placebo-controlled, safety, tolerability, and PK trial of escalating single and multiple doses of PIPE-307 and the effect of food in healthy volunteers. The study included six planned SAD cohorts (up to 80 mg of single doses of PIPE-307) and three planned MAD cohorts (up to 20 mg of PIPE-307 QD for seven days). All SAD and MAD cohorts were completed as planned with no discontinuations. The primary objective of the trial was to assess the safety and tolerability of single and repeat oral doses of PIPE-307 in healthy volunteer subjects. The secondary objective of the trial was to assess the single and repeat dose plasma PK profile of PIPE-307. The trial met the primary and secondary objectives.

TEAEs in both the SAD and MAD components of the Phase 1 trial were generally categorized as mild and transient. There was no clinically significant difference in the AE profile of PIPE-307 between the fasted and fed conditions. No serious or severe AEs were reported among the subjects who received PIPE-307, and no clinically significant effects of PIPE-307 were observed on safety laboratory tests, vital signs, or electrocardiogram. In summary, no dose-limiting AEs or toxicities were observed in the SAD or MAD components of this Phase 1 trial.

We assessed cognitive measures of psychomotor function, attention, memory, and executive function at key PK time points during the SAD and MAD cohorts of this Phase 1 trial. We did not observe evidence of any negative effect of PIPE-307 on aspects of higher cognitive function.

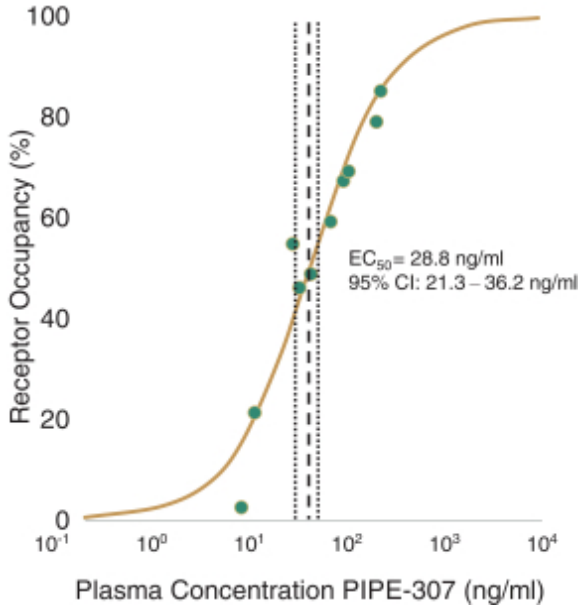
The following figure shows the plasma concentration time profile of the three MAD cohorts after the seventh and final dose of PIPE-307.



Phase 1 Healthy Volunteer PET Trial

We conducted an open-label Phase 1 trial to assess brain receptor occupancy by PET imaging in healthy volunteers after a single oral dose of PIPE-307. The primary objective was to determine the brain M1AChR occupancy using [^{11}C] PIPE-307 PET imaging following a single oral dose of PIPE-307. The secondary objective was to determine the relationship between the plasma concentration of PIPE-307 and the time-course of M1AChR occupancy using [^{11}C] PIPE-307 PET imaging, following a single oral dose of PIPE-307. The trial met the primary and secondary objectives. The trial included three dose cohorts (two subjects in each cohort) at 10, 20 and 40 mg. No safety concerns were observed with the single doses administered in this trial. The PET kinetics demonstrated robust quantification and established the estimated human EC_{50} of 28.8 ng/mL (95% confidence interval (CI): 21.3-36.2 ng/ml) consistent with a daily PIPE-307 dose range of 10 to 20 mg.

The following figure shows plasma concentrations and brain M1R occupancy following single doses of 10, 20, and 40 mg of PIPE-307.



PIPE-307 Completed Preclinical Studies to Support Development in Depression and RRMS

Summary of PIPE-307 Preclinical Toxicity Studies

The toxicity and safety pharmacology profiles of PIPE-307 have been evaluated in a comprehensive nonclinical program. The pivotal toxicology studies were performed in rodents and dogs and consisted of up to six and nine months, respectively, of daily oral dosing with recovery as appropriate. In addition, GLP safety pharmacology studies in rodents and dogs that evaluated cardiovascular (CV), respiratory, and CNS function were performed as well as embryo-fetal development studies in rodents and rabbits.

PIPE-307 Activity Against M1R In Vitro

We evaluated PIPE-307 for potency and selectivity using Ca^{2+} mobilization in cells overexpressing each individual receptor M1 through M5. PIPE-307 potently inhibited acetylcholine induced Ca^{2+} mobilization with an IC_{50} of 3.8 nM. In counter screens, PIPE-307 displayed more than 25-fold functional selectivity against the other muscarinic isoforms.

The following table shows PIPE-307 *in vitro* selectivity profile in Ca^{2+} mobilization assays across the various human muscarinic isoforms.

Properties Receptor (human)	***In vitro Profile***				
	M1R	**M2R**	**M3R**	**M4R**	**M5R**
Functional Ca^{2+} mobilization IC_{50} (nM)	3.8	1,600	210	110	3,600
Fold selectivity vs. M1R	-	420x	55x	29x	950x

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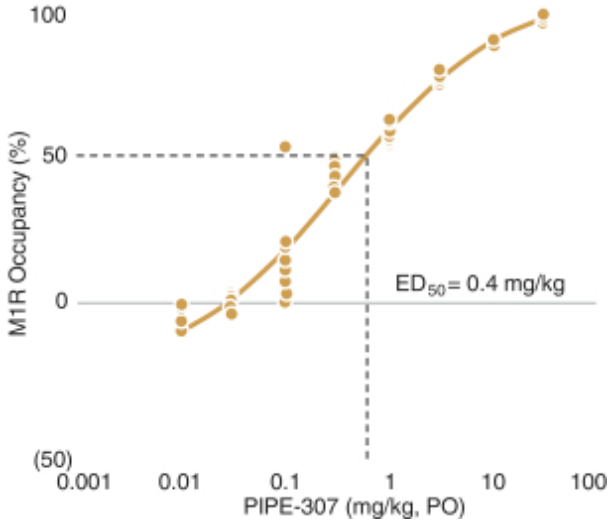
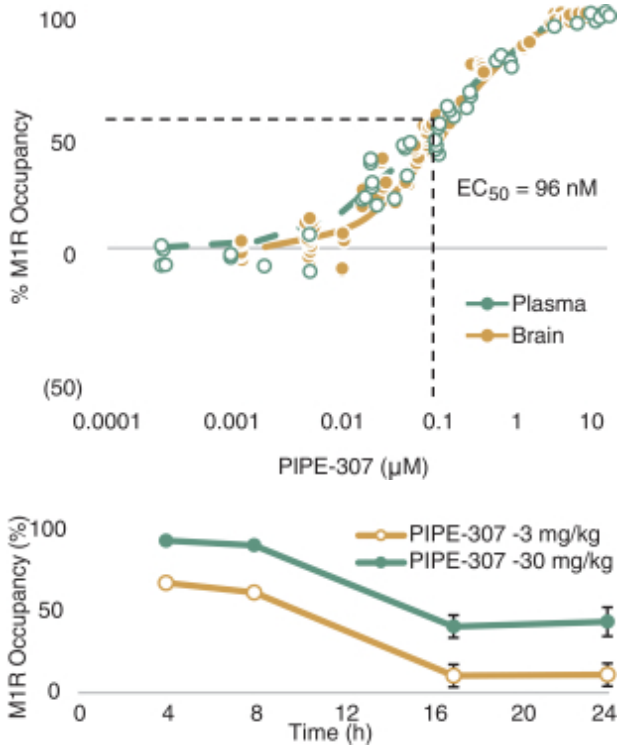
PIPE-307 In Vivo M1R Occupancy

We conducted an *in vivo* receptor occupancy study to characterize the binding of PIPE-307 to M1Rs in the brain. We conducted competition experiments using [^{3}H]-PIPE-307 as a radiotracer *in vivo*. We demonstrated dose-dependent M1R occupancy of PIPE-307 *in vivo* with an ED_{50} of 0.4 mg/kg. We determined that both the resulting total plasma and brain EC_{50} were 96 nM, which is consistent with a brain-to-plasma ratio of one. Correcting for protein binding (91.2% rodent plasma protein binding), the unbound plasma EC_{50} for PIPE-307 was calculated to be 9 nM.

We then conducted time course studies using 3 and 30 mg/kg doses with the brains harvested two to 24 hours post-dose. At 3 mg/kg, ≥ 60% M1R occupancy was achieved for at least eight hours and declined to ≤ 10% occupancy by 17 hours. At the 30 mg/kg dose, greater than 90% occupancy of the M1R was maintained for at least eight hours dropping to 40% at 17 and 24 hours. By extrapolation, ≥ 50% occupancy was maintained for approximately 16 hours.

The following figures show the *in vivo* receptor occupancy profile of PIPE-307, including M1R occupancy of individual subjects plotted as a function dose (top figure), M1R occupancy of individual subjects plotted as a function of plasma and brain PIPE-307 concentrations (middle figure) and time course data following a single oral dose of 3mg/kg and 30mg/kg, plotted as M1R occupancy percentage (bottom figure).





PIPE-307 Development in Depression

Overview of PIPE-307 Preclinical Proof-of-Concept Studies

PIPE-307 is a novel, small molecule, selective inhibitor of M1R. PIPE-307 has been demonstrated to bind with high affinity to the M1R with pronounced selectivity as compared to other muscarinic receptors when tested in cells overexpressing each receptor. In our preclinical studies of PIPE-307, we observed increased mEPSC amplitude, and increased presynaptic release events in the mPFC 24 hours after dosage. Further, PIPE-307 improved depression-like behaviors in the PST.

PIPE-307 Enhances mEPSCs Ex Vivo

As a measure of synaptic plasticity and synaptic transmission, we assessed the mPFC in rodents following a single oral administration of PIPE-307 at 30 mg/kg using *ex vivo* brain slice electrophysiology. PIPE-307 enhanced synaptic transmission, increasing both presynaptic release events and mEPSC amplitude.

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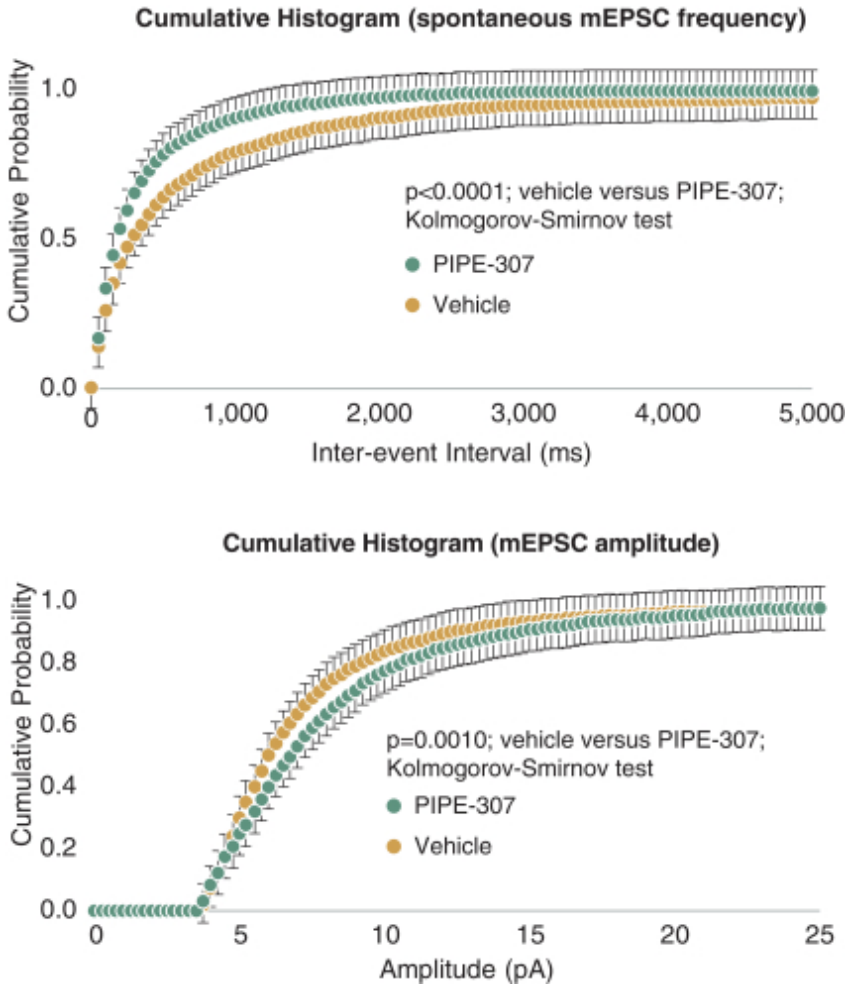
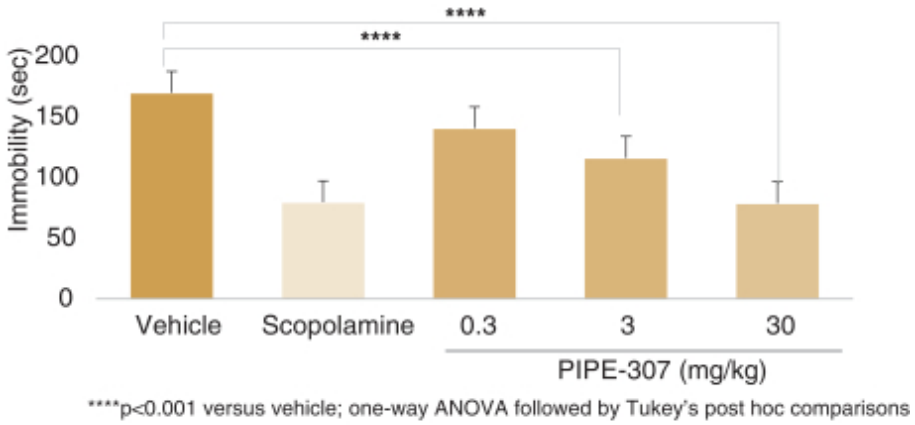
The following figures show the electrophysiological analysis of synaptic transmission, including that PIPE-307 enhances spontaneous mEPSC frequency suggesting presynaptic involvement (top figure) and that PIPE-307 enhances postsynaptic mEPSC amplitude (bottom figure).



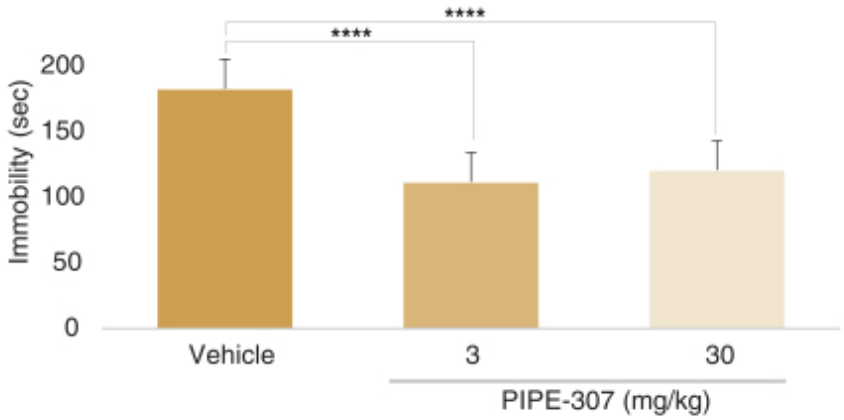
In Vivo Depression Model

We evaluated the effects of PIPE-307 on depression-related parameters in rodents in the PST using either a single oral dosing paradigm or seven-day QD dosing paradigm. In the first paradigm, we administered PIPE-307 in rodents orally at 0.3, 3, or 30 mg/kg two hours prior to the PST. We then used scopolamine as positive control, which was administered at a dose of 3 mg/kg by intraperitoneal injection. In the second paradigm, we administered vehicle or PIPE-307 in rodents orally at 3 or 30 mg/kg/day for seven days, with the PST conducted at two hours post-final dose. We observed that administering a single oral dose of PIPE-307 two hours prior to the PST reduced immobility time compared to vehicle in a dose-dependent manner. Following repeated QD oral administration of PIPE-307 for seven days, the efficacy of the 30 mg/kg/day dose was comparable to that observed following a single dose however, the efficacy of the 3 mg/kg/day dose was improved to a level similar to that of the 30 mg/kg/day dose.

The following figures show PIPE-307 effective in rodent PST, including single dose paradigm (top figure) and seven-day QD dosing paradigm (bottom figure).



****p<0.001 versus vehicle; one-way ANOVA followed by Tukey's post hoc comparisons



****p<0.001 versus vehicle; one-way ANOVA followed by Tukey's post hoc comparisons

Clinical Development Plan of PIPE-307 in Depression

J&J plans to initiate a Phase 2 trial in depression in 2024.

PIPE-307 Development in RRMS

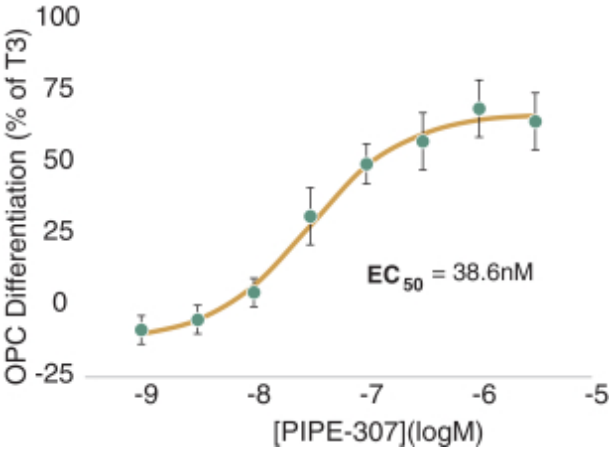
Overview of PIPE-307 Preclinical Proof-of-Concept Studies

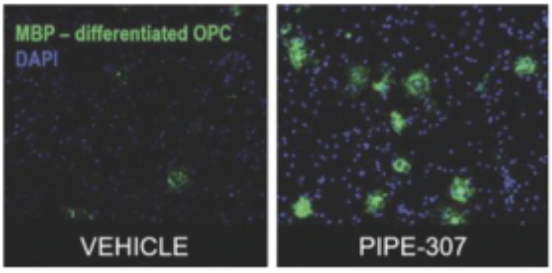
PIPE-307 shows strong potential to remyelinate in both *in vitro* and *in vivo* preclinical studies. In our *in vitro* studies we have demonstrated that PIPE-307 promotes differentiation of OPCs and increases myelin-membrane wrapping in cell culture assays and rodent brain slices. At dose levels that occupy the M1R at EC_{50}, PIPE-307 has been shown to result in significant remyelination in the EAE model with associated functional improvement in motor recovery and VEP latency.

PIPE-307 Induces OPC Maturation in In Vitro Rodent and Human Culture Assays

We determined whether blockade of M1R in primary rodent OPC cultures with PIPE-307 could promote OPC differentiation into oligodendrocytes. Upon blockade of M1R in OPCs with PIPE-307, we observed a concentration dependent increase in the number of MBP+ oligodendrocytes with an EC_{50} of 38.6 nM, and efficacy comparable to that of T3 (triiodothyronine), a commonly used positive control.

The following figure shows that PIPE-307 led to induction of OPC maturation in cell culture as seen by immunostaining for MBP.

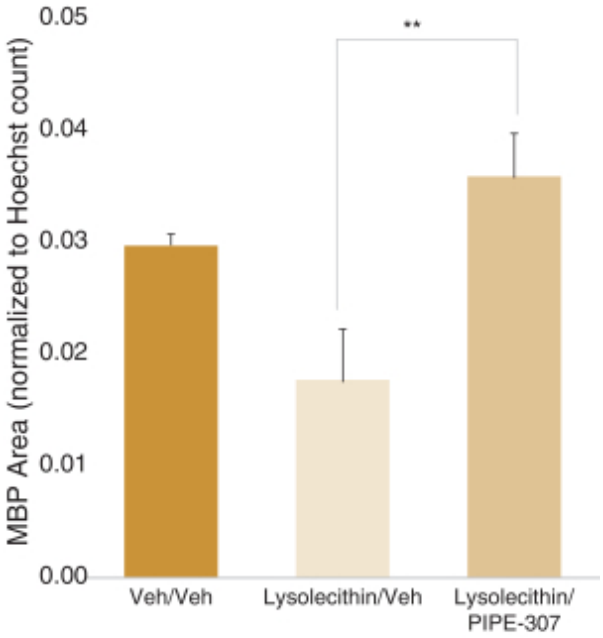




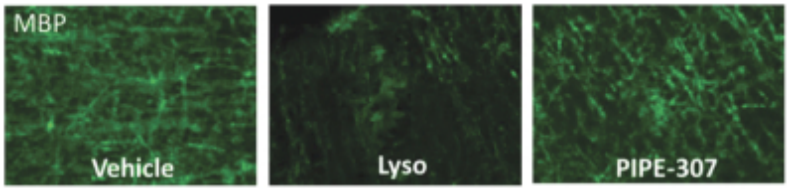
MBP Induction in In Vitro Rodent Organotypic Slice Assay

To characterize the effects of PIPE-307 on remyelination we completed an *ex vivo* study using rodent cultured brain slices treated with lysolecithin (Lyso) to induce demyelination. Slices treated with PIPE-307 after Lyso insult showed an increase MBP protein suggesting remyelination.

The following figures show that PIPE 307 induces MBP protein expression following Lyso induced demyelination in *ex vivo* rodent brain slices.



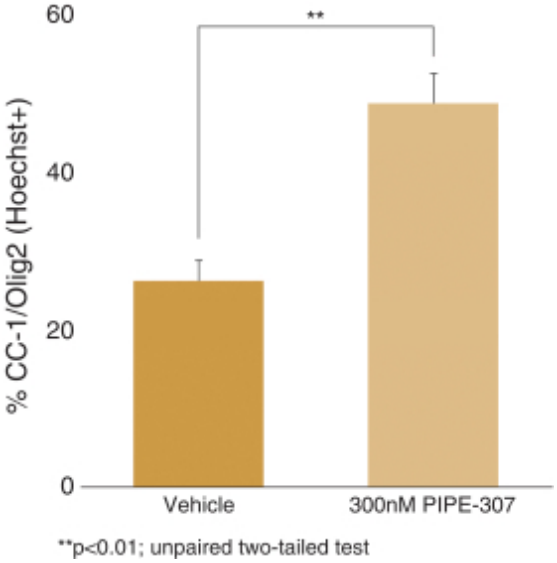
**p<0.01; one-way ANOVA followed by Tukey's post hoc comparisons



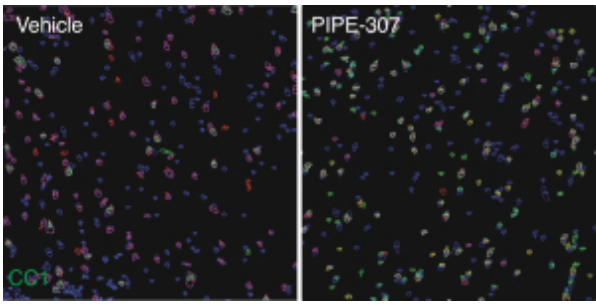
PIPE-307 Increases OPC Maturation in Human Brain Tissue In Vitro

We evaluated PIPE-307 in human brain tissue using fresh human cortex from a 66-year-old female donor (gray and white matter). Treatment of the tissue with 300nM PIPE-307 for nine days revealed an increase in mature oligodendrocytes as determined by an increase in adenomatous polyposis coli, or APC clone 1 positive (CC-1+) cells using immunohistochemical analysis.

The following figures show that PIPE-307 increases the number of CC-1+ mature oligodendrocytes in a human organotypic slice culture assay, demonstrating its role in promoting OPC maturation.



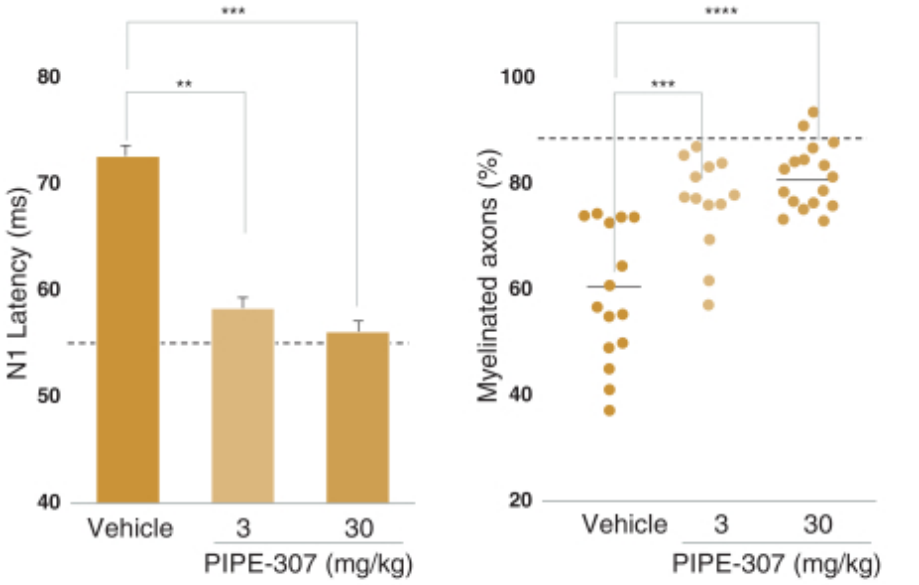
**p<0.01; unpaired two-tailed test



In Vivo MS Models

As described above, we have conducted an *in vivo* M1R study. We tested the ability of PIPE-307 to promote remyelination and to restore neuronal function *in vivo* in a rodent EAE model of inflammatory demyelination. We immunized rodents with a peptide corresponding to an epitope on MOG. After approximately nine days, rodents developed EAE followed by flaccid paralysis along with an increase in VEP N1 latencies. PIPE-307 treatment at doses of 3 mg/kg restored VEP N1 latency and led to a statistically significant increase in the percent of axons in the CNS that were myelinated ($p<0.005$; one-way ANOVA).

The following figure shows that PIPE-307 led to statistically significant improvements in the MOG EAE model as measured by VEP latency and axonal myelination.



**p<0.01, ***p<0.005, ****p<0.001, versus vehicle; one-way ANOVA followed by Tukey's post hoc comparisons

Clinical Development Plan of PIPE-307 for RRMS

In November 2023, we initiated a Phase 2 randomized, double-blind, placebo-controlled, dose-ranging multi-center trial to evaluate the safety and efficacy of oral PIPE-307 as an adjunctive treatment in subjects with RRMS, referred to as the VISTA trial. The primary inclusion criteria are patients aged 18 to 50 years, EDSS of 0 to 6.0 (inclusive), and on stable immunomodulatory treatment over six months prior to screening. The six-month study will enroll approximately 168 subjects into one of three separate arms (1:1:1 randomization ratio, PIPE-307 10 mg: PIPE-307 20 mg: placebo). The co-primary objectives of the trial are to assess the safety of daily oral dosing of PIPE-307, and to assess the effect of six months of PIPE-307 on change in binocular 2.5% low contrast letter acuity (LCLA). The key secondary objectives include LCLA response rate, change in monocular 2.5% LCLA, overall disability as measured by the Multiple Sclerosis Functional Composite (including a timed 25-foot walk test and a 9-hole peg test) and the Symbol Digital Modality Test, MRI measures of myelination (magnetization transfer imaging and diffusion tensor imaging), serum neurofilament light chain, and plasma population PK parameters. We expect to complete enrollment of this Phase 2 trial in 2025.

Our Discovery Pipeline

We plan to further leverage our drug discovery capabilities to build out a franchise with deliberate focus on developing therapeutics that are synergistic with our existing portfolio.

Competition

The biotechnology and pharmaceutical industries are characterized by rapid evolution of technologies, fierce competition and strong defense of intellectual property. While we believe that our platform and our knowledge, experience and scientific resources provide us with competitive advantages, we face competition from major pharmaceutical and biotechnology companies, academic institutions, governmental agencies and public and private research institutions, among others.

If any of the drug candidates we are developing, either alone or in collaboration with J&J, are approved, they will compete with the foregoing therapies and currently marketed drugs, as well as any drugs potentially in development. It is also possible that these drug candidates will face competition from other pharmaceutical approaches as well as other types of therapies. The key competitive factors affecting the success of the drug candidates we are developing, if approved, are likely to be their efficacy, safety, convenience, price, level of generic competition, and availability of reimbursement.

PIPE-791 for IPF

While there is no pharmacological cure for IPF, there are two FDA-approved therapies to treat the disease: pirfenidone (Esbriet, marketed by Genentech/Roche) and nintedanib (Ofev, marketed by Boehringer Ingelheim). We are also aware of LPA1R targeted drug candidates in development for IPF by Bristol-Meyers Squibb, AbbVie Inc., Horizon Therapeutics plc, and Structure Therapeutics Inc. In addition, there are a number of companies developing drug candidates for IPF utilizing approaches with different mechanisms of action, including but not limited to Roche Holding AG, Boehringer Ingelheim, United Therapeutics Corporation, Pliant Therapeutics, RedX Pharma, and Endeavor Biomedicines.

PIPE-791 for Progressive MS

While there are a number of MS medications approved by the FDA for the “active” form of SPMS, no FDA-approved drugs carry a specific indication for Progressive MS. Mitoxantrone (Novantrone®, marketed by Serono) is approved for secondary (chronic) Progressive MS and ocrelizumab (Ocrevus®, marketed by Genentech/Roche) is approved for PPMS.

PIPE-307 for Depression

There are numerous approved therapies for depression, including antidepressant drugs such as selective serotonin reuptake inhibitors, serotonin and norepinephrine reuptake inhibitors, antipsychotics and mood stabilizers. A number of these approved therapies are offered as generics.

PIPE-307 for RRMS

We are aware of over 20 DMTs that suppress inflammatory injury and decrease the rate of annual relapses. However, to our knowledge, none of these approved therapies, including any generics, effectively promote remyelination to mitigate the progressive disability associated with chronic demyelination.

Many of our current or potential competitors, either alone or with their collaboration partners, 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. These 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. Mergers and acquisitions in the biopharmaceutical industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may

obtain FDA or other applicable 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. In addition, our ability to compete may be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic products. There are generic products currently on the market for certain of the indications that we are pursuing and additional products are expected to become available on a generic basis over the coming years. If our drug candidates are approved, we expect that they will be priced at a significant premium over competitive these generic products.

Intellectual property

We strive to protect and enhance the proprietary technology, inventions, trade secrets and know-how that are commercially important for our business, including by seeking, maintaining and defending patent rights, whether developed internally or licensed from third parties. In addition to patent protection, we rely upon unpatented trade secrets and confidential know-how and continuing technological innovation related to our drug candidate programs, clinical translational approach, and drug development efforts. We seek to protect our proprietary information, in part, using confidentiality agreements with any collaborators, scientific advisors, employees and consultants and invention assignment agreements with our employees. We also have agreements requiring assignment of inventions with selected consultants, scientific advisors and collaborators. Our success will depend in part on our ability to obtain and maintain patent protection for our drug candidates and technologies, to preserve our trade secrets, to operate without infringing the proprietary rights of third parties and to acquire licenses related to enabling technology or products.

PIPE-791

The patent portfolio for our PIPE-791 program is based upon our owned patent families that include patent applications directed generally to compositions of matter, pharmaceutical compositions, and methods of using the same to treat neurodegenerative disorders, inflammatory diseases, demyelinating diseases, fibrotic diseases, and cancer; and specifically directed to compositions of matter for PIPE-791, pharmaceutical compositions of PIPE-791 and methods of using the same to treat MS. As of March 29, 2024, we own two patent families covering PIPE-791. The first patent family includes pending patent applications in U.S., Australia, Brazil, Canada, Chile, China, Eurasia, Europe, India, Israel, Indonesia, Japan, South Korea, Mexico, Malaysia, New Zealand, Philippines, Singapore and South Africa directed to compositions of matter for PIPE-791, pharmaceutical compositions of PIPE-791 and methods of using the same to treat neurodegenerative disorders, inflammatory diseases, demyelinating diseases, fibrotic diseases, and cancer. The second patent family includes a pending PCT patent application and covers a PIPE-791 polymorph composition of matter and methods of using the same to treat neurodegenerative disorders, inflammatory diseases, demyelinating diseases, fibrotic diseases, and cancer. Any U.S. or ex-U.S. patents that may issue from pending applications in the first patent family are projected to have a statutory expiration date of August 4, 2042, excluding any additional term for patent term adjustments or patent term extensions, if applicable. Any U.S. or ex-U.S. patents that may issue from pending applications in the second patent family are projected to have a statutory expiration date of January 26, 2044, excluding any additional term for patent term adjustments or patent term extensions, if applicable.

PIPE-307

The patent portfolio for our PIPE-307 program is based upon our owned patent families that include patents and patent applications directed generally to compositions of matter, pharmaceutical compositions, and methods of using the same to treat neurodegenerative disorders; and specifically directed to compositions of matter for PIPE-307, pharmaceutical compositions of PIPE-307 and

methods of using the same to treat MS. As of March 29, 2024, we own two patent families covering PIPE-307. The first patent family includes patent applications pending in U.S., Australia, Brazil, Canada, Chile, China, Eurasia, Europe, Hong Kong, India, Israel, Indonesia, Japan, South Korea, Mexico, Malaysia, New Zealand, Philippines, Singapore and South Africa directed to compositions of matter for PIPE-307, pharmaceutical compositions of PIPE-307 and methods of using the same to treat MS. The second patent family includes pending patent applications in U.S., United Arab Emirates, Australia, Bahrain, Brazil, Canada, Chile, China, Colombia, Algeria, Eurasia, Europe, Indonesia, Israel, India, Jordan, Japan, South Korea, Kuwait, Mexico, Malaysia, New Zealand, Oman, Panama, Peru, Philippines, Qatar, Saudi Arabia, Singapore, Thailand, Ukraine, Vietnam and South Africa and covers a PIPE-307 polymorph composition of matter and methods of using the same to treat MS. Any U.S. or ex-U.S. patents that may issue from pending applications in the first patent family are projected to have a statutory expiration date of October 6, 2040, excluding any additional term for patent term adjustments or patent term extensions, if applicable. Any U.S. or ex-U.S. patents that may issue from pending applications in the second patent family are projected to have a statutory expiration date of April 13, 2042, excluding any additional term for patent term adjustments or patent term extensions, if applicable.

Patent Term Extensions

In the United States, the term of a patent covering an FDA-approved drug may, in certain cases, be eligible for a patent term extension under the Hatch-Waxman Act as compensation for the loss of patent term during the FDA regulatory review process. The period of extension may be up to five years, but cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval. Only one patent among those eligible for an extension and only those claims covering the approved drug, a method for using it, or a method for manufacturing it may be extended. Similar provisions are available in Europe and in certain other jurisdictions to extend the term of a patent that covers an approved drug. It is possible that issued U.S. patents covering the use of products from our intellectual property may be entitled to patent term extensions. If our use of drug candidates or the drug candidate itself receive FDA approval, we intend to apply for patent term extensions, if available, to extend the term of patents that cover the approved use or drug candidate. We also intend to seek patent term extensions in any jurisdictions where available, however, there is no guarantee that the applicable authorities, including the FDA, will agree with our assessment of whether such extensions should be granted, and, even if granted, the length of such extensions.

License and Collaboration Agreements

J&J License Agreement

In February 2023, we entered into the J&J License Agreement, pursuant to which we granted J&J an exclusive, worldwide license to develop, manufacture and commercialize PIPE-307 in all indications.

J&J is generally responsible for all development, manufacturing and commercialization activities for PIPE-307. Upon J&J deciding to conduct a first Phase 3 clinical trial for a product using PIPE-307, we have an opt-in right to fund a portion of all Phase 3 and subsequent development costs for PIPE-307, with such costs capped annually. If we opt to fund such development costs, then the royalties we are eligible to receive will increase by one to two percentage points.

Consistent with our rights under the J&J License Agreement, we are sponsoring and conducting, at our own expense, a Phase 2 clinical trial of PIPE-307 in patients with RRMS. J&J has the right to discontinue our clinical trial if it has good faith concerns that this study presents safety risks or could have a material adverse effect on its development or commercialization of PIPE-307 and such

concerns cannot be resolved between the parties. In addition, J&J has the right, in its sole discretion, to further develop or to elect not to develop PIPE-307 for this indication.

Pursuant to the terms of the J&J License Agreement, we received an upfront payment of $50.0 million. We are also eligible to receive approximately $1.0 billion in non-refundable, non-creditable milestone payments, pursuant to the terms of the J&J License Agreement. Additionally, we are eligible to receive tiered royalties in the low-double digit to high-teen percent range on net sales of products containing PIPE-307. Separately, we received a $25.0 million equity investment from JJDC.

The J&J License Agreement expires on a licensed product-by-product and country-by-country basis upon the last to occur of: (i) the expiration of the last-to-expire licensed patent claim covering the composition of matter of the licensed compound in such licensed product in such country; (ii) the expiration of exclusive marketing rights conferred by a regulatory authority or applicable law (other than patent exclusivity) for such licensed product in such country; and (iii) ten years after the first commercial sale of such licensed product. Either party may terminate the J&J License Agreement in the event of an uncured material breach by the other party or a bankruptcy or insolvency of the other party. J&J may terminate the J&J License Agreement without cause upon prior written notice to us. Upon any termination, all exclusive license rights granted to J&J terminate.

Manufacturing

Our drug candidates consist of small molecules designed to reactivate innate repair pathways to restore function. As a result, we can rely on the well-established and available manufacturing and drug-delivery technologies developed for small molecules over decades by the pharmaceutical industry. We source our APIs from contract manufacturers with a track record of manufacturing in compliance with cGMP. After quality control testing, we release our APIs to additional contract manufacturers for formulation and packaging into the final drug product for use in our clinical trials. We expect to continue to use contract manufacturing resources for commercialization of our products, at least until our operations reach a scale sufficient to justify investment in internal manufacturing capacity.

Our third-party contract manufacturers and their facilities, as well as the manufacture of our APIs and drug candidates, are required to be in compliance with cGMP requirements. The cGMP requirements govern manufacturing processes and procedures, including requirements relating to organization of personnel, buildings and facilities, equipment, control of components and packaging containers and closures, production and process controls, packaging and labeling controls, holding and distribution, laboratory controls, records and reports, and returned or salvaged products. Drug candidates used in late-stage clinical trials must be manufactured in accordance with cGMP requirements and manufacturing specifications and processes must satisfy FDA or other authorities' requirements before any product is approved and before we can offer commercial products. Our third-party manufacturers are also subject to periodic inspections of facilities by the FDA and other authorities. We have assembled a team of employees and consultants to oversee our technical quality and our third-party contract manufacturers.

Commercialization

In light of our stage of development, we have not yet established a sales and marketing organization or distribution capabilities. If PIPE-791 receives marketing approval, we plan to commercialize PIPE-791 in the United States by developing our own sales and marketing organization targeting neurologists. Outside the United States, we intend to establish commercialization strategies for PIPE-791 as we approach possible commercial approval for this drug candidate, with a primary strategy of collaborations with other companies. J&J is responsible for the commercialization activities for PIPE-307.

Government Regulation

The FDA and comparable regulatory authorities at federal, state and local levels and in other countries impose substantial and burdensome requirements upon companies involved in, among other things, the clinical development, manufacture, marketing, and distribution of drugs, such as those we are developing. These agencies and other federal, state, local, and foreign entities regulate, among other things, the research and development, testing, manufacture, quality control, safety, effectiveness, labeling, packaging, storage, record keeping, approval, advertising and promotion, marketing, distribution, tracking, sale, post-approval monitoring and reporting, sampling, and export and import of our drug candidates. We, along with our vendors, collaboration partners, CROs and CMOs, will be required to navigate the various preclinical, clinical, manufacturing and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval of our drug candidates. The process of obtaining regulatory approvals of drug products and ensuring subsequent compliance with appropriate federal, state, local, and foreign statutes and regulations requires the expenditure of substantial time and financial resources.

U.S. Drug Development Process

In the United States, the FDA regulates drugs under the FDCA and its implementing regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local, and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process, or after approval, may subject an applicant to a variety of administrative or judicial sanctions, such as the FDA's refusal to approve pending NDAs withdrawal of an approval, imposition of a clinical hold, issuance of warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement, or civil or criminal penalties.

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

- completion of preclinical laboratory tests, animal studies, and formulation studies in compliance with the FDA's GLP regulations;
- submission to the FDA of an IND which must become effective before human clinical trials may begin and must be updated annually or when significant changes are made;
- approval by an independent IRB or independent ethics committee at each clinical trial site before each trial may be initiated;
- performance of adequate and well-controlled human clinical trials in accordance with GCP requirements to establish the safety and efficacy of the proposed drug product for each indication;
- submission to the FDA of an NDA , after completion of all pivotal trials;
- payment of user fees associated with an NDA;
- satisfactory completion of the product application by an FDA advisory committee review, where appropriate and if applicable;
- a determination by the FDA within 60 days of the receipt of an NDA to file the NDA for review;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is produced to assess compliance with cGMP requirements, and to assure that the facilities, methods, and controls are adequate to preserve the drug's identity, strength, quality, and purity, and of selected clinical investigation sites to assess compliance with GCPs;

- potential FDA audit of the preclinical and/or clinical trial sites that generated the data in support of the NDA;
- FDA review and approval of the NDA, including consideration of the views of any FDA advisory committee, prior to commercial marketing or sale of the drug in the United States; and
- compliance with any post-approval requirements, including the potential requirement to implement a REMS or to conduct a post-approval study.

Preclinical Studies

Preclinical studies are required for submission of an IND and include laboratory evaluation of product chemistry, toxicology, PK, pharmacology, pharmacodynamics, and formulation, as well as animal studies to assess potential safety and efficacy. Prior to beginning the first clinical trial with a drug candidate in the United States, an IND must be submitted to the FDA. An IND is a request by a clinical study sponsor for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical trials. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, and any available clinical data or literature, among other things, to the FDA as part of an IND. Some preclinical testing may continue even after the IND is submitted. An IND automatically becomes effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions related to one or more proposed clinical trials and places the clinical trial on a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. A clinical hold is an order issued by the FDA to the sponsor to delay a proposed clinical investigation or to suspend an ongoing investigation. A partial clinical hold is a delay or suspension of only part of the clinical work requested under the IND. For example, a specific protocol or part of a protocol is not allowed to proceed, while other protocols may do so. Clinical holds also may be imposed by the FDA at any time before or during clinical trials due to safety concerns about on-going or proposed clinical trials or noncompliance with specific FDA requirements, and the trials may not begin or continue until the FDA notifies the sponsor that the hold has been lifted. As a result, submission of an IND may not result in the FDA allowing clinical trials to commence.

Clinical Trials

Clinical trials involve the administration of the investigational new drug to human subjects under the supervision of qualified investigators in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the trial, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. A protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND. In addition, an IRB at each site participating in the clinical trial must review and approve the plan for any clinical trial and the informed consent form before it commences at that site and must monitor the trial until completed.

An IRB is charged with protecting the welfare and rights of trial participants and assesses issues such as whether the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. Information about certain clinical trials must be submitted within specific time frames to the National Institutes of Health for public dissemination on their www.clinicaltrials.gov website.

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

- **Phase 1**: The drug is initially introduced into healthy human subjects or patients with the target disease or condition and tested for safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses and, if possible, to gain early evidence of its effectiveness. 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 with the indicated disease.
- **Phase 2**: The drug is administered to a limited patient population to preliminarily evaluate the efficacy of the product for specific targeted diseases, and to determine dosage tolerance and optimal dosage and to identify possible adverse effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- **Phase 3**: The drug is administered to an expanded patient population, generally at geographically dispersed clinical trial sites, in well-controlled clinical trials to generate enough data to statistically evaluate the efficacy and safety of the product for approval, to establish the overall risk-benefit profile of the product, to provide an adequate basis for product approval, and to further test for safety. Generally, two adequate and well-controlled Phase 3 clinical trials are required by the FDA for approval of an NDA.

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

Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to patients. In addition, some clinical trials are overseen by an independent group of qualified experts organized by the sponsor, known as a data safety monitoring board or committee. Depending on its charter, this group may determine whether a trial may move forward at designated check points based on certain data from the trial and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy.

Concurrent with clinical trials, companies usually complete additional animal studies, and must also develop additional information about the chemistry and physical characteristics of the drug and finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the drug candidate, and, among other things, the manufacturer must develop methods for testing the identity, strength, quality, and purity of the final drug. In addition, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the drug candidate does not undergo unacceptable deterioration over its shelf life.

Progress reports detailing the results of the clinical trials and nonclinical studies must be submitted to the FDA at least annually. Written IND safety reports must be submitted to the FDA and the investigators within fifteen days after the trial sponsor determines the information qualifies for

reporting for serious and unexpected suspected adverse events, findings from other studies or animal or *in vitro* testing that suggest a significant risk for human volunteers exposed to the product and any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must also notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction as soon as possible but in no case later than seven calendar days after the sponsor's initial receipt of the information. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, or at all. There are also requirements governing the reporting of ongoing clinical trials and completed trial results to public registries.

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

Marketing Approval

Assuming successful completion of the required clinical testing, the results of the preclinical studies and clinical trials, together with detailed information relating to the product's chemistry, manufacture, controls, and proposed labeling, among other things, are submitted to the FDA as part of an NDA requesting approval to market the product for one or more indications. Data may come from company-sponsored clinical trials intended to test the safety and effectiveness of a use of a product, or from a number of alternative sources, including studies initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and effectiveness of the investigational drug product to the satisfaction of the FDA. In most cases, the submission of an NDA is subject to a substantial application user fee; a waiver or reduction of such fees may be obtained under certain limited circumstances. Under the Prescription Drug User Fee Act (PDUFA) guidelines that are currently in effect, the FDA has a goal of ten months from the date of "filing" of a standard NDA for a new molecular entity to review and act on the submission. The FDA has approximately two months to make a "filing" decision. Specifically, the FDA conducts a preliminary review of all NDAs within the first 60 days after submission, before accepting them for filing, to determine whether they are sufficiently complete to permit substantive review. The FDA may request additional information rather than accept an NDA for filing. In this event, the application must be resubmitted with the additional information. The resubmitted application is also subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review. The FDA reviews an NDA to determine, among other things, whether the drug is safe and effective and whether the facility in which it is manufactured, processed, packaged, or held meets standards designed to assure the product's continued safety, quality, and purity.

The FDA also may require submission of a REMS plan to ensure that the benefits of the drug outweigh its risks. The REMS plan could include medication guides, physician communication plans, assessment plans, and/or elements to assure safe use, such as restricted distribution methods, patient registries or other risk minimization tools.

The FDA may refer an application for a novel drug to an advisory committee. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates, and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving an NDA, the FDA typically will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA may inspect one or more clinical trial sites to assure compliance with GCP requirements.

After evaluating the NDA and all related information, including the advisory committee recommendation, if any, and inspection reports regarding the manufacturing facilities and clinical trial sites, the FDA may issue an approval letter, or, in some cases, a complete response letter. A complete response letter generally contains a statement of specific conditions that must be met in order to secure final approval of the NDA and may require additional clinical or preclinical testing in order for the FDA to reconsider the application.

Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when those conditions have been met to the FDA's satisfaction, the FDA will typically issue an approval letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications.

Even if the FDA approves a product, it may limit the approved indications for use of the product, require that contraindications, warnings, or precautions be included in the product labeling, require that post-approval studies, including Phase 4 clinical trials, be conducted to further assess a drug's safety after approval, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution and use restrictions or other risk management mechanisms under a REMS plan, which can materially affect the potential market and profitability of the product. The FDA may prevent or limit further marketing of a product based on the results of post-marketing studies or surveillance programs. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, are subject to further testing requirements and FDA review and approval.

The Pediatric Research Equity Act, as amended (PREA), requires a sponsor to conduct pediatric clinical trials for most drugs, and specifically, for most NDAs or NDA supplements for a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration. Under PREA, original NDAs and supplements must contain a pediatric assessment unless the sponsor has received a deferral or waiver. The required assessment must evaluate the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The sponsor or the FDA may request a deferral or full or partial waiver of pediatric clinical trials for some or all of the pediatric subpopulations. A deferral may be granted for several reasons, including a finding that the drug is ready for approval for use in adults before pediatric clinical trials are complete or that additional safety or effectiveness data needs to be collected before the pediatric clinical trials begin.

The FDA will send a noncompliance letter to any sponsor that fails to submit the required assessment, keep a deferral current, or fails to submit a request for approval of a pediatric formulation.

Orphan Drug Designation and Exclusivity

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

If a product that has orphan drug designation subsequently receives the first FDA approval for a particular active ingredient for the disease or condition for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan product exclusivity or if the FDA finds that the holder of the orphan product exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan product exclusivity does not prevent the FDA from approving a different product for the same disease or condition, or the same product for a different disease or condition. Orphan designation also allows for potential financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages, and user fee waivers.

Orphan exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval of the same drug as defined by the FDA or if our drug candidate is determined to be contained within the competitor’s product for the same indication or disease, and we are unable to demonstrate that our product is clinically superior to the competitor product. A designated orphan drug may not receive orphan exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective, if the second applicant demonstrates that its product is clinically superior to the approved product with orphan exclusivity or the manufacturer of the approved product is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

FDA-Expedited Development and Review Programs

The FDA has various programs, including fast track designation, accelerated approval, priority review, and breakthrough therapy designation, which are intended to expedite and facilitate the process for the development and the FDA review of drugs that are intended for the treatment of serious or life-threatening diseases or conditions and demonstrate the potential to address unmet medical needs, and to provide patients with access to the drugs more quickly than standard FDA review timelines typically permit.

To be eligible for a fast track designation, the FDA must determine, based on the request of a sponsor, that a product is intended to treat a serious or life-threatening disease or condition and preclinical or clinical data demonstrates the potential to address an unmet medical need. The FDA will determine that a product will fill an unmet medical need if it will provide a therapy where none exists or provide a therapy that may be potentially superior to existing therapy based on efficacy, or safety or

other factors. Fast track designation provides increased opportunities for sponsor interactions with the FDA during preclinical and clinical development. The FDA may also review sections of the NDA for a fast track product on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept those sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA. If the FDA accepts a portion of an application, this does not necessarily mean that review will commence or proceed before the complete application is submitted. Actual commencement and scheduling of review depends on many factors, including staffing, workload, competing priorities, timeline for completing the application, and the perceived efficiency of commencing review before receipt of the complete submission.

The FDA may give a priority review designation to drugs that, if approved, would provide a significant improvement in safety or effectiveness in the treatment, diagnosis or prevention of a serious disease or condition. A priority review means that the goal for the FDA to review an application is six months, rather than the standard review of 10 months under current PDUFA guidelines. These six-and 10-month review periods are measured from the “filing” date rather than the receipt date for NDAs for new molecular entities, which typically adds approximately two months to the timeline for review and decision from the date of submission. Products that are eligible for fast track designation may also be eligible for priority review.

In addition, products studied for their safety and effectiveness in treating serious or life-threatening illnesses and that fulfill an unmet medical need may be eligible for accelerated approval. Such products therefore may be approved on the basis of adequate and well-controlled clinical trials establishing that the drug product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require a sponsor of a drug receiving accelerated approval to perform post-marketing confirmatory studies to verify and describe the predicted effect on irreversible morbidity or mortality or other clinical endpoint, and the drug may be subject to accelerated withdrawal of approval procedures. The FDA may withdraw accelerated approval if, among other things, the confirmatory study fails to verify clinical benefit; the applicant fails to perform required confirmatory studies with due diligence; post-marketing use demonstrates that post-marketing restrictions are inadequate to assure safe use; the applicant fails to adhere to agreed-upon post-marketing restrictions; promotional materials are false or misleading; or, other evidence demonstrates that the product is not shown to be safe or effective under its conditions of use. Additionally, under the FDORA the FDA is now permitted to require, as appropriate, that such trials be underway prior to approval or within a specific time period after the date of approval for a product granted accelerated approval. Under FDORA, the FDA has increased authority for expedited procedures to withdraw approval of a drug or an indication approved if, for example, the confirmatory trial fails to verify the predicted clinical benefit of the product. In addition, the FDA currently requires pre-approval of promotional materials as a condition for accelerated approval, which could adversely impact the timing of the commercial launch of the product. Drugs granted accelerated approval must meet the same statutory standards for safety and effectiveness as those granted traditional approval.

Sponsors can also request designation of a drug candidate as a “breakthrough therapy.” A breakthrough therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. A drug that receives breakthrough therapy designation is eligible for certain FDA actions as appropriate, such as holding timely meetings and providing advice, intended to expedite the

development and review of an application for approval of a breakthrough therapy. The designation includes all the benefits of a fast track designation in addition to intensive guidance on an efficient drug development program beginning as early as Phase 1, and FDA organizational commitment to expedited development, including involvement of senior managers and experienced review staff in a cross-disciplinary review, where appropriate. The breakthrough therapy designation is a distinct status from both accelerated approval and priority review, which can also be granted to the same drug if relevant criteria are met.

Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened. Furthermore, fast track designation, accelerated approval, priority review, and breakthrough therapy designation do not change the standards for approval but may expedite the development or review process. We may explore some of these opportunities for our drug candidates as appropriate.

Post-Approval Requirements

Drugs manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, product sampling and distribution, advertising and promotion, and reporting of adverse experiences with the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual program fee requirements for certain eligible products.

The FDA may impose a number of post-approval requirements as a condition of approval of an NDA. For example, the FDA may require post-marketing testing, including Phase 4 clinical trials, and surveillance to further assess and monitor the product's safety and effectiveness after commercialization. Discovery of previously unknown problems with a product or the failure to comply with applicable FDA requirements can have negative consequences, including adverse publicity, judicial or administrative enforcement, warning letters from the FDA, mandated corrective advertising or communications with doctors, and civil or criminal penalties, among others. Newly discovered or developed safety or effectiveness data may require changes to a product's approved labeling, including the addition of new warnings and contraindications, and also may require the implementation of other risk management measures.

In addition, drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and state and local agencies and are subject to periodic unannounced inspections by government agencies for compliance with cGMP and other requirements. Changes to the manufacturing process are strictly regulated and often require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP requirements and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance.

Once an 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 reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in mandatory revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical trials to assess new safety risks; or imposition

of distribution or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- safety alerts, Dear Healthcare Provider letters, press releases, or other communications containing warning or other safety information about the product;
- fines, warning letters, untitled letters, or holds on clinical trials;
- refusal of the FDA to approve pending NDAs or supplements to approved NDAs, 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 healthcare programs; or
- mandated modification of promotional materials and labeling and issuance of corrective information.

The FDA strictly regulates marketing, labeling, advertising, and promotion of products that are placed on the market. Drugs may be promoted only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including adverse publicity, untitled or warning letters, requirements to conduct corrective advertising and potential civil and criminal penalties. Physicians may prescribe, in their independent professional medical judgment, legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate physicians in their practice of medicine, including their choices of treatments for their patients. The FDA does, however, restrict drug manufacturer's communications on the subject of off-label use of their products. The federal government has levied large civil and criminal fines against companies for alleged improper promotion of off-label use and has enjoined companies from engaging in off-label promotion. The FDA and other regulatory agencies have also required that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed. However, companies may share certain truthful and non-misleading information that is otherwise consistent with a product's FDA-approved labeling.

In addition, the distribution of prescription pharmaceutical products is subject to the Prescription Drug Marketing Act, as amended (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.

Market Exclusivity

Market exclusivity provisions under the FDCA can delay the submission or the approval of certain marketing applications. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to obtain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance.

During the exclusivity period, the FDA may not approve or even accept for review an abbreviated new drug application (ANDA) or an NDA submitted under Section 505(b)(2) of the FDCA (505(b)(2) NDA) submitted by another company for another drug containing the same active moiety, regardless of whether the drug is intended for the same indication as that of the original innovative drug or for another indication. However, such an application may be accepted for review after four years if it contains a certification of patent invalidity or non-infringement to one of the patents listed with the FDA by the innovator NDA holder.

The FDCA alternatively provides three years of market exclusivity for an NDA, or supplement to an existing NDA, if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application. This three-year exclusivity covers only the modification for which the drug received approval based on the new clinical investigations and does not prohibit the FDA from approving ANDAs or 505(b)(2) NDAs for drugs containing the active agent for the original indication or condition of use. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Pediatric exclusivity is another type of market exclusivity available in the United States. Pediatric exclusivity provides for an additional six months of marketing exclusivity attached to another period of exclusivity if a sponsor conducts clinical trials in children, in response to a Written Request from the FDA. The FDA may only grant pediatric exclusivity if existing patent or exclusivity protections for the drug would otherwise expire at least nine months after the grant of the pediatric exclusivity; FDA has 180 days to make a pediatric exclusivity determination once the NDA sponsor submits study reports required under the written request. The issuance of a written request does not require the sponsor to undertake the described clinical trials.

Other Healthcare Laws and Compliance Requirements

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the state, local, and foreign jurisdictions in which they conduct their business. Such laws include, without limitation, U.S. federal and state anti-kickback, fraud and abuse, false claims, consumer fraud, pricing reporting, data privacy and security, and transparency laws and regulations, as well as similar foreign laws in the jurisdictions outside the United States. Violations of such laws, or any other governmental regulations that apply, may result in penalties, including, without limitation, civil and criminal penalties, damages, fines, additional reporting and oversight obligations, the curtailment or restructuring of operations, exclusion from participation in governmental healthcare programs, and individual imprisonment.

In the event that third-party reimbursement becomes available for our products, we would also become subject to the various federal and state fraud and abuse laws applicable to pharmaceutical companies. Among other things, these laws may impact our arrangements with customers or potential customers, as well as our consulting and other arrangements with healthcare providers and others who purchase, recommend or order our products. The federal AKS is a criminal law that prohibits, among other things, persons and entities (including a prescription drug manufacturer or a party acting on its behalf) from knowingly and willfully offering, paying, soliciting, or receiving remuneration, directly or indirectly, overtly or covertly, in cash or in kind, in return for or to induce or reward the purchase, lease, order, arrangement for, or recommendation of, any item or service that is reimbursable, in whole or in part, under a federal healthcare program, such as Medicare or 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. Violation of the federal AKS can result in significant civil monetary penalties and criminal

fines, as well as imprisonment and exclusion form participation in federal healthcare programs. Although there are a number of statutory exemptions and regulatory safe harbors to the federal AKS protecting certain common business arrangements and activities from prosecution or regulatory sanctions, the exemptions and safe harbors are drawn narrowly, and practices that do not fit squarely within an exemption or safe harbor, or for which no exception or safe harbor is available, may be subject to scrutiny.

In addition, the federal civil and criminal false claims laws (including the civil FCA, for which claims can be brought by private citizens on behalf of the government through qui tam or whistleblower actions), impose liability (including significant penalties and damages) for, among other things, knowingly presenting, or causing to be presented, false or fraudulent claims for payment of federal funds, and knowingly making, using, or causing to be made, a false record or statement material to an obligation to pay money to the federal government, or knowingly concealing or knowingly and improperly avoiding, decreasing or concealing an obligation to pay money to the federal government. Moreover, the government may assert that a claim including items or services resulting from a violation of the federal AKS constitutes a false or fraudulent claim for purposes of the civil FCA. Because of the threat of treble damages and mandatory penalties per false or fraudulent claim or statement under the FCA, healthcare and pharmaceutical companies often resolve allegations without admissions of liability for significant and material amounts. Pharmaceutical and other healthcare companies also are subject to other federal false claim laws, including, among others, federal criminal healthcare fraud and false statement statutes that extend to non-government health benefit programs.

The fraud provisions of the HIPAA impose criminal liability for knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third-party payors, and prohibit knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement or representation, or making or using any false writing or document knowing the same to contain any materially false fictitious or fraudulent statement or entry, in connection with the delivery of or payment for healthcare benefits, items or services.

Further, the federal Physician Payments Sunshine Act requires manufacturers with a product subject to reimbursement under certain federal health care programs, among others, to track and report annually certain data on payments and other transfers of value to U.S.-licensed physicians, teaching hospitals, and various other providers, as well as ownership and investment interests held by certain physicians and their immediate family members in the manufacturer. Analogous state laws addressing these topics may also affect our arrangements.

The majority of states also have statutes similar to the federal AKS and civil FCA that apply to items and services reimbursed under Medicaid and other state health care programs, or in several states, regardless of the payor.

State laws also may require pharmaceutical companies to comply with the pharmaceutical industry’s voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, as well as require the registration of pharmaceutical sales representatives and the reporting of pricing information and marketing expenditures.

Coverage and Reimbursement

Sales of any pharmaceutical product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance and managed healthcare organizations, and the level of reimbursement for such product by third-party payors. Significant uncertainty exists as to the coverage and reimbursement

status of any newly approved product. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. One third-party payor's decision to cover a product does not ensure that other payors will also provide coverage for the product. As a result, the coverage determination process can require manufacturers to provide scientific and clinical support for the use of a product to each payor separately, and can be a time-consuming process, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Payor reimbursement typically is different based on the type and setting for administration. Using Medicare as an example, therapies administered in the physician office usually are reimbursed under Medicare Part B and are billed to Medicare by the physician practice purchasing the product. Conversely, products taken by the patient orally at home usually are reimbursed under Medicare Part D and are billed to the program by the pharmacy dispensing the product. For products administered under the supervision of a physician in a physician office setting, obtaining coverage and adequate reimbursement may be particularly difficult because of the higher prices often associated with such drugs. If Medicare reimbursement is available for such products, it is based on the average sales price for the product plus a certain percentage. Additionally, separate reimbursement for the product itself or the treatment or procedure in which the product is used may not be available, which may impact physician utilization.

In addition, third-party payors are increasingly reducing reimbursements for pharmaceutical products and services. The U.S. government and state legislatures have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement, and requirements for substitution of generic products. Third-party payors are increasingly challenging the prices charged, examining the medical necessity, and reviewing the cost effectiveness of pharmaceutical products, in addition to questioning their safety and efficacy. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. Further, such payors are increasingly challenging the price, examining the medical necessity and reviewing the cost effectiveness of medical drug candidates. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit or delay sales of any product. Decreases in third-party reimbursement for any product or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product.

In international markets, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. 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. Pharmaceutical products may face competition from lower-priced products in foreign countries that have placed price controls on pharmaceutical products and may also compete with imported foreign products. Furthermore, there is no assurance that a product will be considered medically reasonable and necessary for a specific indication, will be considered cost-effective by third-party payors, that an adequate level of reimbursement will be established even if coverage is available, or that the third-party payors' reimbursement policies will not adversely affect the ability of manufacturers to sell products profitably.

Healthcare Reform

In the United States and certain foreign jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes to the healthcare system that affect the pharmaceutical industry. In March 2010, ACA was signed into law; it substantially changed the way

healthcare is financed by both governmental and private payers in the United States. The ACA contains a number of provisions of particular import to the pharmaceutical industry, including those governing enrollment in federal healthcare programs, reimbursement adjustments, and fraud and abuse changes. For example, the ACA requires collection of Medicaid rebates paid for covered outpatient drugs paid by Medicaid managed care organizations; imposes a nondeductible annual fee on pharmaceutical manufacturers or importers who sell “branded prescription drugs” to specified federal government programs; and requires a distinct calculation of rebates owed by manufacturers under the Medicaid Drug Rebate Program for covered outpatient drugs that are inhaled, infused, instilled, implanted, or injected.

The ACA and its implementation continue to evolve as a result of legislative, administrative, and judicial developments. We expect to continue to see changes involving the ACA which may potentially impact pricing, coverage, or reimbursement of our products.

In addition to the ACA, U.S. governments continue to seek to adopt healthcare policies and reforms intended to curb healthcare costs, such as federal or state controls on payment for drugs (including under Medicare, Medicaid, and commercial health plans). For example, the IRA, among other things, requires the U.S. Secretary of Health and Human Services to negotiate, with respect to Medicare units and subject to a specified cap, the price of a set number of certain high Medicare spend drugs and biologicals per year, which will begin taking effect in 2026. The IRA also makes several changes to the Medicare Part D benefit, including a limit on annual out-of-pocket costs, and a change in manufacturer liability under the program which could negatively affect our business and financial condition. The IRA also establishes a Medicare Part B and Part D inflation rebate scheme, under which manufacturers will owe rebates if, generally speaking, the average sales price of a Part B drug, or the average manufacturer price of a Part D drug, increases faster than the pace of inflation.

Government Price Reporting

Furthermore, a number of government pricing programs create certain price reporting obligations. Under the Medicaid Drug Rebate program, a participating manufacturer is required to pay a rebate to each state Medicaid program for its covered outpatient drugs that are dispensed to Medicaid beneficiaries and paid for by the state Medicaid program as a condition of having federal funds being made available for drugs under Medicaid and Medicare Part B. Those rebates are based on pricing data reported by the manufacturer on a monthly and quarterly basis to CMS.

Federal law requires that a manufacturer also participate in the 340B Drug Pricing program in order for federal funds to be available for the manufacturer’s drugs under Medicaid and Medicare Part B. The 340B program requires participating manufacturers to agree to charge no more than the 340B “ceiling price” for the manufacturer’s covered outpatient drugs to a specified “covered entities,” including community health centers and other entities that receive certain federal grants, as well as hospitals that serve a disproportionate share of low-income patients. The 340B ceiling price is calculated based on the information reported under the Medicaid Drug Rebate program.

Also under federal law, manufacturers must report to CMS, on a quarterly basis, average sales price information for certain categories of drugs that are paid under the Medicare Part B program. Manufacturers calculate average sales price based on a statutorily defined formula as well as regulations and guidance. CMS uses the reported information to determine payment rates for drugs under Medicare Part B.

In addition, starting in 2023, manufacturers must pay refunds to Medicare for single source drugs or biologicals, or biosimilar biological products, reimbursed under Medicare Part B and packaged in

single-dose containers or single-use packages for units of discarded drug reimbursed by Medicare Part B in excess of 10 percent of total allowed charges under Medicare Part B for that drug. A failure to pay refunds for discarded drugs under the discarded drug refund program could be subject us to civil monetary penalties of 125 percent of the refund amount.

Finally, in order to be eligible to have its products paid for with federal funds under the Medicaid and Medicare Part B programs and purchased by the Big Four agencies and certain federal grantees, a manufacturer is required to participate in the VA FSS pricing program, established under Section 603 of the Veterans Health Care Act of 1992. Under this program, the manufacturer is obligated to make its covered drugs available for procurement on an FSS contract and charge a price to the Big Four agencies that is no higher than the FCP, which is a price calculated pursuant to a statutory formula. The FCP is derived from the Non-FAMP, which the manufacturer calculates and reports to the VA on a quarterly and annual basis. Pursuant to applicable law, knowing provision of false information in connection with a Non-FAMP filing can subject a manufacturer to significant penalties for each item of false information. The FSS contract also contains extensive disclosure and certification requirements. Under Section 703 of the National Defense Authorization Act for FY 2008, the manufacturer is required to pay quarterly rebates to DoD on utilization of its innovator products that are dispensed through DoD's Tricare network pharmacies to Tricare beneficiaries. The rebates are calculated as the difference between the annual Non-FAMP and FCP for the calendar year that the product was dispensed.

Foreign Regulations

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain approval by the comparable regulatory authorities of foreign countries before we can commence clinical trials, and approval of foreign countries or economic areas, such as the EU and the UK, before we may market products in those countries or areas. 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. Other foreign regulators such as the European Medicines Agency in the EU and the MHRA in the UK require compliance with GCPs for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. In terms of product licensing, the European Union has its own European wide procedure for the authorization of eligible medicines, referred to as the centralized procedure where there is a single application, a single evaluation and a single authorization throughout the European Union. This centralized procedure also overs Northern Ireland. A separate product licensing procedure applies in Great Britain (England, Scotland and Wales) (GB). From January 1, 2024, eligible GB marketing authorization applications can benefit from a new International Recognition Procedure that will allow the MHRA to conduct targeted assessments by recognizing approvals from trusted reference regulatory agencies in Australia, Canada, the EU, Japan, Singapore, Switzerland and the US.

Within the EU and the UK, regulatory protections are afforded to medicinal products such as data exclusivity. On April 26, 2023, the European Commission adopted a proposal for a new Directive and a new Regulation. If made into law, this proposal will revise and replace the existing general pharmaceutical legislation and will affect the existing period of regulatory protection afforded to medicinal products in the EU and Northern Ireland.

Australia

Our Phase 1 clinical trial for PIPE-307 is being conducted in Australia. The Therapeutic Goods Administration (TGA) and the NHMRC set the GCP requirements for clinical research in Australia.

Compliance with the regulations, standards and codes set by the TGA and NHMRC is mandatory. Under the *Therapeutic Goods Act 1989* (Cth) and the *Therapeutic Goods Regulations 1990* (Cth), it is a condition (amongst other conditions) of all clinical trials involving investigational medicinal products to comply with the National Statement on Ethical Conduct in Research Involving Humans, published by the NHMRC, and the Guideline for Good Clinical Practice published by the International Council for Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH Guidelines). The ICH Guidelines have been adopted in Australia, and must be complied with across all fields of clinical research, including those related to pharmaceutical quality, nonclinical and clinical data requirements and trial designs. The basic requirements for preclinical data to support a first-in-human trial under ICH Guidelines are applicable in Australia. Requirements related to adverse event reporting in Australia are generally similar to those required in other major jurisdictions, although reporting timeframes may differ to other jurisdictions.

Clinical trials conducted using “unapproved therapeutic goods” in Australia, being those which have not yet been evaluated by the TGA for quality, safety and efficacy must occur pursuant to either the Clinical Trial Notification Scheme (CTN Scheme) or the Clinical Trial Approval Scheme (CTA Scheme). In each case, the trial is supervised by a Human Research Ethics Committee (HREC), an independent review committee set up under guidelines of the NHMRC that ensures the protection of rights, safety and well-being of human subjects involved in a clinical trial. A HREC reviews, approves and provides continuing examination of trial protocols (including any amendments), methods and materials intended to be used in obtaining and documenting informed consent of the clinical trial subjects.

The CTN Scheme broadly involves:

- submission to a HREC, of all material relating to the proposed clinical trial, including the trial protocol;
- the HREC reviews the scientific validity of the trial design, the balance of risk versus harm of the therapeutic good, the ethical acceptability of the trial process, and approves the trial protocol. The HREC is also responsible for monitoring the conduct of the trial;
- the institution or organization at which the trial will be conducted, referred to as the “Approving Authority”, giving final approval for the conduct of the trial at the site, having regard to the advice from the HREC; and
- the investigator submitting a ‘Notification of Intent to Conduct a Clinical Trial’ form (CTN Form) to the TGA. The CTN form must be signed by the sponsor, the principal investigator, the chairman of the HREC and a person responsible from the Approving Authority. The TGA does not review any data relating to the clinical trial however CTN trials cannot commence until the trial has been notified to the TGA.

Under the CTA Scheme:

- a sponsor submits an application to conduct a clinical trial to the TGA for evaluation and comment;
- a sponsor must forward any comments made by the TGA Delegate to the HREC(s) at the sites where the trial will be conducted;
- the HREC is responsible for considering the scientific and ethical issues of the proposed trial protocol.

A sponsor cannot commence a trial under the CTA Scheme until written advice has been received from the TGA regarding the application and approval for the conduct of the trial has been obtained from an ethics committee and the institution at which the trial will be conducted.

Approval for inclusion in the Australian Register of Therapeutic Goods (ARTG), is required before a therapeutic good (including pharmaceutical product) may be marketed (or supplied, imported, exported or manufactured) in Australia. Exceptions apply to therapeutic goods/pharmaceutical products that are supplied, imported, and exported to and from Australia for the purposes of a clinical trial, on the basis that certain conditions are met (e.g. the trial is conducted in accordance with the CTN or CTA scheme).

Once a sponsor decides to register a therapeutic good/pharmaceutical product in Australia, in order to obtain registration of the product on the ARTG, it is required that (amongst others):

- the sponsor submits appropriate documentation, including the outcomes of clinical trials and studies, to allow the TGA to assess the quality, safety and efficacy of the therapeutic product/pharmaceutical product; and
- the sponsor submits evidence which demonstrates that the manufacture of the therapeutic product/pharmaceutical product complies with the applicable GMP requirements.

The TGA has the ultimate discretion to decide whether to include the therapeutic product/pharmaceutical product in the ARTG.

Data Privacy and Security Laws

We receive, transmit and store personal data. Numerous federal, state and international laws address privacy, data protection and the collection, storing, sharing, use, disclosure and protection of personal data and other user data. The legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing focus on privacy and data protection issues which may affect our business. For example, in California, the California Consumer Privacy Act (CCPA), as amended by the California Privacy Rights Act (CPRA), establishes certain requirements for data use and sharing transparency and provides California consumers (as defined in the law) certain rights concerning the use, disclosure, and retention of their personal data, with certain exceptions including for clinical trial data and data subject to HIPAA. Such rights include the right to opt out of certain sales of personal information. The CCPA also prohibits covered businesses from discriminating against consumers (e.g., charging more for services) for exercising any of their CCPA rights. The CCPA provides for potentially severe statutory penalties, and a private right of action for data breaches involving certain types of personal information. The CPRA, approved by a November 2020 ballot initiative, introduced significant amendments to the CCPA and established and funded a dedicated California privacy regulator, the California Privacy Protection Agency (CPPA). The amendments introduced by the CPRA went into effect on January 1, 2023, and new implementing regulations are expected to be introduced by the CPPA. Failure to comply with the CCPA may result in, among other things, significant civil penalties, and injunctive relief, or statutory or actual damages. Similarly, there are legislative proposals in the EU, the United States, at both the federal and state level, as well as other jurisdictions that could impose new obligations or limitations. For example, other states, including Virginia, Colorado, Utah, and Connecticut have enacted privacy laws similar to the CCPA. Moreover, other states such as Washington have passed health privacy specific legislation. While we do not believe we are currently subject to the CCPA, we or our business partners may be subject to similar privacy legislations and we continue to assess the impact of privacy legislation and regulatory developments on our business as additional information and guidance becomes available. The legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing focus on privacy and data protection issues which may affect our business. Failure to comply with these laws and regulations could result in government enforcement actions and create liability for us (including the imposition of significant civil and/or criminal penalties), private litigation and/or adverse publicity that could negatively affect our business.

Additionally, the Health Insurance Portability and Accountability Act of 1996, the Health Information Technology for Economic and Clinical Health Act, and their implementing regulations (collectively, HIPAA) imposes privacy and security obligations on covered entity health care providers, health plans, and health care clearinghouses, as well as their "business associates" – certain persons or entities that create, receive, maintain, or transmit protected health information in connection with providing a specified service or performing a function on behalf of a covered entity. The U.S. Department of Health and Human Services (HHS) (through the Office for Civil Rights) as well as state Attorneys General have direct enforcement authority over covered entities and business associates with regard to compliance with HIPAA regulations. We may obtain health information from third parties that are subject to privacy and security requirements under HIPAA. Although we may not directly be subject to HIPAA, we could potentially be subject to criminal penalties if we, our affiliates, or our agents knowingly obtain individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA.

Additionally, to the extent we extend clinical trial or other activity into other jurisdictions, we may be subject to international data protection laws. For example, Australia, where our Phase 1 clinical trial for PIPE-307 is being conducted. EU member states, the United Kingdom, Switzerland and other jurisdictions have also adopted data protection laws and regulations, which impose significant compliance obligations. In the EEA and the United Kingdom, the collection and use of personal data, including clinical trial data, is governed by the provisions of the General Data Protection Regulation including as implemented in the UK (collectively, GDPR). The GDPR places certain obligations on the processing of personal data, including health data from clinical trials, including ensuring the lawfulness of processing personal data (including obtaining valid consent of the individuals to whom the personal data relates, where applicable), disclosing information on processing details to the individuals, the adequacy, relevance and necessity of the personal data collected, the retention of personal data collected, and the sharing of personal data with third parties. Other obligations relate to the use of personal data in accordance with individual rights, the transfer of personal data out of the EEA or the United Kingdom to third countries including the US, security breach notifications, and the security and confidentiality of the personal data. Enforcement by EEA and UK regulators is generally active, and failure to comply with the GDPR or applicable member state/UK local law may result in fines, amongst other things (such as notices requiring compliance within a certain timeframe). Further, the UK Government may amend/update UK data protection law, which may result in changes to our business operations and potentially incur commercial cost. Guidance on implementation and compliance practices are often updated, or otherwise revised.

In Australia, the collection, use and disclosure of personal information, which includes clinical trial data, is largely governed by the provisions of the *Privacy Act 1988* (Cth)(Privacy Act). The Privacy Act imposes additional restrictions on the collection, use and disclosure of 'sensitive information' about individuals, which includes health information. Under the Privacy Act, such information cannot be collected without the individual's consent, nor used and disclosed for purposes other than the primary purpose for which it was collected, unless consent is obtained from the individual to do so. Cross-border transfers of personal information are generally not permitted unless it is done with the consent of the individual, or the entity transferring the data has taken reasonable steps to ensure that the overseas recipient of the information will comply with the Privacy Act, which generally requires entering into contractual arrangements to this effect. Additional exceptions may apply. In relation to the use and disclosure of health information in the context of research relevant to public health and safety, the Privacy Act also recognizes that there are situations in which it is impractical to obtain the consent of the individual to collect, use and disclose their health information. In those situations, researchers are permitted to depart from the usual requirements of the Privacy Act, but must follow the Guidelines under Section 95 of the Privacy Act 1988 (which are guidelines dealing with medical research), and the Guidelines approved under Section 95AA of the Privacy Act (which are guidelines dealing with the

handling of health information for the purpose of research relevant to public health or public safety), as issued by the NHRMC.

Substantial monetary penalties for non-compliance with the Privacy Act apply, and include maximum fines of the greater of the following amounts: AUD$50.0 million, if the court cannot determine the value of the benefit that the body corporate, and any related body corporate, have obtained directly or indirectly and that is reasonably attributable to the conduct constituting the contravention – 3 times the value of that benefit, or if the court cannot determine the value of that benefit – 30% of the adjusted turnover of the body corporate during the breach turnover period for the contravention.

Employees and Human Capital Resources

Human Capital

As of December 31, 2023, we had 31 employees, all of which were full-time employees. Of our full-time employees, 25 are engaged in research and development activities and the remaining employees are engaged in general and administrative activities. Thirty-two percent of our employees have an M.D. or a Ph.D. From time to time, we also retain independent contractors to support our organization. None of our employees are represented by a labor union or covered by collective bargaining agreements, and we believe our relationship with our employees is good.

Talent Development, Compensation and Retention

We focus on attracting, retaining, and cultivating talented individuals. The principal purposes of our equity and cash incentive plans are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards, in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Our values-based culture and our employees are a critical component of our success. We strive to create a supportive and professional environment for our employees. We expend considerable management time and attention, and financial resources, to attracting, retaining, and motivating exceptional individuals at our company.

Inclusive Workplace

We are committed to creating and maintaining a workplace that fosters diversity and an inclusive work environment that supports our workforce. Our management team and employees are also expected to exhibit and promote honest, ethical, and respectful conduct in the workplace. All of our employees must adhere to a code of business conduct and ethics that sets standards for appropriate behavior and are required to attend annual training on the code of business conduct and ethics.

Facilities

Our corporate headquarters is located at 10578 Science Center Drive, San Diego, California, where we lease approximately 17,408, square feet of office and laboratory space. We lease this space under a lease, as amended, that will terminate upon the commencement date of a new lease we have entered into to lease approximately 24,695 square feet of office and laboratory space located at 3565 General Atomics Court, San Diego, California, which new lease has an initial term of five years from the commencement date. We believe that our facilities are sufficient to meet our current operations and that any additional space we may require will be available on commercially reasonable terms.

Environmental Matters

Our laboratory operations require the use of hazardous materials, which subject us to a variety of federal, state and local environmental and safety laws and regulations. Some of the regulations under the current regulatory structure provide for strict liability, holding a party potentially liable without regard to fault or negligence. We could be held liable for damages and fines as a result of our business operations should contamination of the environment or individual exposure to hazardous substances occur. We cannot predict how changes in laws or development of new regulations will affect our business operations or the cost of compliance.

Legal Proceedings

We are not currently subject to any legal proceedings. From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. Regardless of outcome, litigation can have an adverse impact on us due to defense and settlement costs, diversion of management resources, negative publicity, reputational harm and other factors.

MANAGEMENT

Executive Officers and Directors

The following table sets forth the names, ages and positions of our executive officers and directors as of April 1, 2024.

Name	Age	Position
Executive Officers:		
Carmine Stengone	48	Chief Executive Officer, President and Director
Peter T. Slover	49	Chief Financial Officer
Daniel S. Lorrain, Ph.D.	55	Chief Science Officer
Stephen L. Huhn, M.D.	63	Chief Medical Officer and Senior Vice President, Clinical Development
Non-Employee Directors:		
Evert Schimmelpennink(1)(2)	52	Chair of the Board of Directors
Todd R. Brady(1)(2)	45	Director
Stefan M. Larson, Ph.D.*	48	Director
Lori M. Lyons-Williams(1)(3)	47	Director
Clare R. Ozawa, Ph.D.*	50	Director
Olivia Ware(2)(3)	67	Director

(1) Member of the audit committee.
(2) Member of the compensation committee.
(3) Member of the nominating and corporate governance committee.
* The director submitted a resignation letter, which became effective immediately prior the effectiveness of the registration statement of which this prospectus forms a part.

Executive Officers

Carmine Stengone has served as our President and Chief Executive Officer and as a board member since October 2018. Previously, he served as President, Chief Executive Officer and a board member of Avelas Biosciences, Inc. from January 2014 to October 2018 and as Chief Business Officer from May 2012 to January 2014. He also served as Senior Vice President, Business Development for COI Pharmaceuticals, Inc. (now Avalon Bioventures) and a member of its investment committee from May 2013 to October 2018, where he helped co-found six new biotechnology companies. Mr. Stengone served as Vice President of Corporate Development for Afraxis Holdings, Inc. and co-founder and CEO of Afraxis, Inc., a spin-out company from Afraxis Holdings, Inc. from 2010 to 2014. He previously held positions of increasing responsibility at Phenomix Corporation, Anadys and J&J Pharmaceutical Research & Development. Mr. Stengone is currently serving as a member of the board of directors of Kiora Pharmaceuticals, Inc. Mr. Stengone received his MBA from the Johnson Graduate School of Management at Cornell University, his M.S. in Organic Chemistry from Duke University and a B.S. in Chemistry from Wake Forest University. We believe that Mr. Stengone is qualified to serve on our board of directors because of the perspective and experience he provides as our President and Chief Executive Officer as well as his broad experience within the biotechnology industry.

Peter T. Slover has served as our Chief Financial Officer since September 2020. Mr. Slover previously served as the Chief Financial Officer of Sophiris Bio, Inc.(Sophiris) from January 2013 to May 2020 and as the Head of Finance and Principal Accounting Officer of Sophiris from April 2012 to January 2013. From April 2004 to April 2012, Mr. Slover held a variety of significant management positions at Anadys, including Vice President, Finance and Operations, a position that he held from

July 2009 to April 2012, Senior Director, Finance and Corporate Controller, Senior Manager, Financial Reporting and Internal Controls and Manager of Financial Reporting. Prior to joining Anadys, Mr. Slover was an auditor at KPMG LLP, where he spent seven years in public accounting. Mr. Slover is a Certified Public Accountant in the State of California (inactive). He received a B.S. in Business Administration from Shippensburg University.

Daniel S. Lorrain, Ph.D. is a member of our founding executive team and has served as our Chief Scientific Officer since March 2018. Previously, he was Executive Director and then promoted to Vice President of Biology at Inception Therapeutics, Inc. (Inception), a Versant Ventures discovery engine, from 2011 to 2018 where he led all aspects of biology and non-clinical pharmacology, including the acquisition of the remyelination program Inception 5 by Roche Holdings Inc. Prior to joining Inception, Dr. Lorrain was Senior Director of Pharmacology at Amira Pharmaceuticals, Inc. from 2005 to 2010 and contributed to the discovery of several clinical stage small molecule therapeutics to treat inflammation and fibrosis. Notably, he led the efforts of the LPA1R program that was acquired by Bristol-Myers Squibb Company. Prior to that, he was a Research Fellow at Merck & Co., Inc. from 1999 to 2005 where he contributed to early central nervous system drug discovery. He received a B.S. in Psychology from the State University of New York at Buffalo and a Ph.D. in Behavioral Neuroscience from the State University of New York at Buffalo and was a postdoctoral fellow at the University of Chicago.

Stephen L. Huhn, M.D. has served as our Chief Medical Officer and Senior Vice President of Clinical Development since January 2020. He has over 14 years of experience with early clinical development in central nervous system disorders across a wide range of neuroscience indications. Dr. Huhn also served as Chief Medical Officer and Vice President of Clinical Development at StemCells, Inc. from 2007 to 2016 where he led multiple clinical programs in lysosomal storage diseases, age-related macular degeneration, spinal cord injury and leukodystrophies. After the reverse merger of StemCells, Inc. in July 2016 until January 2020, Dr. Huhn provided independent consulting services to multiple biotechnology companies focused on early clinical development for a range of CNS indications and therapeutic platforms. Dr. Huhn is a board-certified neurosurgeon and Fellow in the American Association of Neurological Surgeons. He trained in neurosurgery at the University of Maryland and completed fellowships in neuro-oncology at the University of California, San Francisco and pediatric neurosurgery at Northwestern University. Before pursuing clinical translation in industry, Dr. Huhn was Chief of Pediatric Neurosurgery and an Associate Professor in Neurological Surgery at Stanford University. Dr. Huhn holds an M.D. awarded by the University of Arizona College of Medicine.

Non-Employee Directors

Evert Schimmelpennink has served as a member of our board of directors since January 2022 and as the chair of our board of directors since March 2024. Mr. Schimmelpennink has served as the President and Chief Executive Officer and as a member of the board of directors of LENZ Therapeutics since March 2021. Previously, from August 2017 to October 2020, Mr. Schimmelpennink served as President and Chief Executive Officer and a member of the board of directors of publicly listed Pfenex, Inc., a biopharmaceutical company, until its acquisition by Ligand Pharmaceuticals Inc. in late 2020. From November 2019 until its sale, Mr. Schimmelpennink also served as the acting Principal Financial Officer and Principal Accounting Officer of Pfenex, Inc. From October 2015 to August 2017, Mr. Schimmelpennink served as Chief Executive Officer of Alvotech, a biopharmaceutical company. Prior to that, Mr. Schimmelpennink held senior positions at Pfizer Inc. and Hospira, Inc. within their global specialty injectables businesses, as well as Synthon BV. Mr. Schimmelpennink currently serves on the board of directors of iBio, Inc. Mr. Schimmelpennink holds a M.Sc. in Bioprocess Engineering from the University of Wageningen in the Netherlands and a business degree from the Arnhem Business School. We believe that Mr. Schimmelpennink is qualified to serve on our board of directors due to his experience in executive and leadership positions at other biotechnology companies.

Todd R. Brady has served as a member of our board of directors since November 2019. Mr. Brady has served as the Director of Investments at Brace Pharma Capital since 2014. He currently serves on the board of directors of Vero Biotech Inc. since July 2015, Navitor Pharmaceuticals since July 2021, and as board observer for HotSpot Therapeutics since May 2020 and Antiva BioSciences since July 2021. He previously served as a board member of Avidity Biosciences from May 2017 to January 2021, Cocrystal Pharma Inc. from February 2019 to March 2020, and as a board observer for Precision Biosciences from June 2018 to March 2019, and Miragen Therapeutics from October 2015 to February 2017. Mr. Brady has an extensive and diverse background in capital markets, working in equity research, asset management, private equity and corporate banking over the duration of his career. Mr. Brady received a Master's of Business Administration from the Schulich School of Business (York University) and is a Chartered Financial Analyst. We believe that Mr. Brady is qualified to serve on our board of directors because of his financial expertise and experience in the biotechnology industry.

Stefan M. Larson, Ph.D. has served as a member of our board of directors since November 2019. Dr. Larson has served as partner at Sectoral Asset Management, responsible for leading biotechnology venture investments, since September 2018. He also serves on the boards of directors of Prilenia Therapeutics BV (since May 2020), Amolyt Pharma (since September 2021) and LENZ Therapeutics (since March 2023). Prior to joining Sectoral Asset Management, he was an Entrepreneur-in-Residence and later Venture Partner with Versant Ventures from July 2013 to July 2018, where he led the establishment of their Toronto-based Discovery Engine. He was also the founding CEO of Northern Biologics from January 2015 to November 2017 and a cofounder of two medical device companies: Perimeter Medical Imaging from January 2010 to December 2012, and was with Tornado Spectral Systems from January 2010 to December 2012. He began his career at McKinsey & Company in San Francisco and Toronto. Dr. Larson graduated from McGill University with a B.Sc. in Biology, and from University of Toronto with an M.Sc. in Molecular and Medical Genetics. He completed his Ph.D. in Biophysics at Stanford University. We believe that Dr. Larson is qualified to serve on our board of directors because of his commercial expertise and experience in the biotechnology industry.

Lori M. Lyons-Williams has served as a member of our board of directors since August 2020. Ms. Lyons-Williams currently serves as President and Chief Executive Officer at Abdera Therapeutics Inc. a biopharmaceutical company. Previously, Ms. Lyons-Williams was President and Chief Operating Officer at Neumora Therapeutics, Inc., a biopharmaceutical company from April 2021 until April 2022. From December 2016 to May 2020, Ms. Lyons-Williams served as Chief Commercial Officer at Dermira, Inc. (Dermira), a public biopharmaceutical company, where she was responsible for the strategic, financial and operational leadership of the company's product portfolio, until Dermira's acquisition. From January 2002 to August 2016, Ms. Lyons-Williams worked at Allergan, Inc. (Allergan), a public biotechnology company, where she held positions of increasing responsibility, most recently as Vice President, Sales & Marketing, Urology. Ms. Lyons-Williams currently services on the boards of Abdera Therapeutics Inc., where she is also Chief Executive Officer, and of RAPT Therapeutics, Inc. a publicly traded biopharmaceutical company. From June 2019 until its acquisition in April 2021, Ms. Lyons-Williams served on the board of directors of Five Prime Therapeutics, Inc. Ms. Lyons-Williams received a B.A. in Interdisciplinary Studies from Virginia Polytechnic Institute and State University and an M.B.A., Marketing from the Carlson School of Management at the University of Minnesota. We believe that Ms. Lyons-Williams is qualified to serve on our board of directors because of her commercial expertise and experience in executive and leadership positions at other biotechnology companies.

Clare R. Ozawa, Ph.D. has served as a member of our board of directors since May 2017. Dr. Ozawa has served as a Managing Director at Versant Venture Management, LLC, a life science venture capital firm investing in early stage healthcare companies, since July 2017 and was an

investment professional at Versant from 2008 to 2011. Prior to re-joining Versant, Dr. Ozawa was the Chief Business Officer of Inception Sciences from January 2011 to May 2014 and served as Inception Science's Chief Operating Officer from June 2014 to July 2017. She also worked in the office of the Chief Executive Officer at Novartis Pharma from 2006 to 2008 and at McKinsey & Company from 2002 to 2006. Dr. Ozawa previously served on the board of Oyster Point Pharma, Inc., a public biopharmaceutical company and serves on the board of several private companies. Dr. Ozawa received a B.S. in biological sciences and a Ph.D. in neurosciences from Stanford University. We believe that Dr. Ozawa is qualified to serve on our board of directors because of her expertise and experience in the biotechnology industry, including her educational background, and her management experience.

Olivia Ware has served on our board of directors since March 2024. Ms. Ware has more than 20 years of experience in pharmaceutical drug development, commercialization and healthcare management. From November 2019 to March 2021, Ms. Ware served as the Senior Vice President, BTK Franchise Head at Principia Biopharma Inc., which was acquired by Sanofi S.A. in 2020, where she was responsible for developing overall portfolio strategy for the company's three BTKi molecules. From August 2018 to November 2019, Ms. Ware served as Senior Vice President, U.S. Market and Franchise Development at Proteus Digital Health, Inc. From 2011 to 2018, Ms. Ware worked in a number of public and private biopharma firms as a private consultant. From 2016 to 2017, Ms. Ware was the Chief Commercial Officer at CytRx, Inc. From 1997 to 2010, Ms. Ware worked at Genentech, Inc. in a variety of roles of increasing responsibility in commercial, team leadership and product development. During her time at Genentech, Ms. Ware played a key role in the launch of several commercial drug products, including Rituxan®, Herceptin®, Avastin® and Lucentis®, and as Head of Oncology Team Leadership was responsible for molecule, disease and platform strategic plans and oncology portfolio management. Ms. Ware has served as a member of the board of Arcellx, Inc. since June 2022, Revance Therapeutics, Inc. since March 2021 and Ambrx Biopharma Inc. from April 2021 until June 2022. Ms. Ware holds an A.B. in Psychology from Davidson College and an M.B.A. in Finance and Marketing from the University of North Carolina at Chapel Hill. We believe Ms. Ware is qualified to serve on our board of directors due to her executive and board experience with life science and biotechnology companies.

Election of Officers

Our executive officers are appointed by, and serve at the discretion of, our board of directors. There are no family relationships among any of our directors or executive officers.

Board Composition

Our board of directors is currently authorized to have eight members and, following the resignation of Dr. Larson and Dr. Ozawa, consists of five members, who were elected pursuant to the amended and restated voting agreement that we entered into with certain holders of our common stock and certain holders of our preferred stock and the related provisions of our amended and restated certificate of incorporation.

The provisions of this voting agreement will terminate upon the completion of this offering, after which there will be no further contractual obligations regarding the election of our directors. Our directors hold office until their successors have been elected and qualified or appointed, or the earlier of their death, resignation or removal.

In accordance with the terms of our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon the completion of this offering, our board of

directors will be divided into three classes with staggered three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- the Class I director will be Ms. Ware, and her term will expire at the first annual meeting of stockholders held following the completion of the offering.
- the Class II directors will be Ms. Lyons-Williams and Mr. Schimmelpennink, and their terms will expire at the second annual meeting of stockholders held following the completion of the offering; and
- the Class III directors will be Mr. Stengone and Mr. Brady, and their terms will expire at the third annual meeting of stockholders held following the completion of the offering.

Directors in a particular class will be elected for three-year terms at the annual meeting of stockholders in the year in which their terms expire. As a result, only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Each director's term continues until the election and qualification of his or her successor, or the earlier of his or her death, resignation or removal.

Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon the completion of this offering provide that only our board of directors can fill vacant directorships, including newly-created seats. Any additional directorships resulting from an increase in the authorized number of directors would be distributed pro rata among the three classes so that, as nearly as possible, each class would consist of one-third of the authorized number of directors.

The classification of our board of directors may have the effect of delaying or preventing changes in our control or management. See the section titled "Description of Capital Stock—Anti-Takeover Provision—Certificate of Incorporation and Bylaw Provisions" elsewhere in this prospectus.

Director Independence

Our Class A common stock has been approved for listing on the Nasdaq Global Select Market. Under the rules of Nasdaq, independent directors must comprise a majority of a listed company's board of directors within one year of the completion of this offering. In addition, the rules of Nasdaq require that, subject to specified exceptions and phase-in periods, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent. Audit committee members and compensation committee members must also satisfy the independence criteria set forth in Rule 10A-3 and Rule 10C-1, respectively, under the Exchange Act. Under the rules of Nasdaq, a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

To be considered to be independent for purposes of Rule 10A-3 and under the rules of Nasdaq, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors or any other board committee: (1) accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries or (2) be an affiliated person of the listed company or any of its subsidiaries.

To be considered independent for purposes of Rule 10C-1 and under the rules of Nasdaq, the board of directors must affirmatively determine that each member of the compensation committee is independent, including a consideration of all factors specifically relevant to determining whether the director has a relationship to the company which is material to that director's ability to be independent

from management in connection with the duties of a compensation committee member, including, but not limited to: (i) the source of compensation of such director, including any consulting, advisory or other compensatory fee paid by the company to such director and (ii) whether such director is affiliated with the company, a subsidiary of the company or an affiliate of a subsidiary of the company.

Our board of directors undertook a review of its composition, the composition of its committees and the independence of our directors and considered whether any director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, our board of directors has determined that, other than Mr. Stengone, our Chief Executive Officer, each of our other six directors, do not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the rules of Nasdaq, including in the case of all the members of our audit committee, the independence criteria set forth in Rule 10A-3 under the Exchange Act, and in the case of all the members of our compensation committee, the independence criteria set forth in Rule 10C-1 under the Exchange Act.

In making these determinations, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining his or her independence, including the beneficial ownership of our capital stock by each non-employee director, and the transactions involving them described in the section titled "Certain Relationships and Related Party Transactions" elsewhere in this prospectus. There are no family relationships among any of our directors or executive officers.

Board Leadership Structure

Our board of directors is currently chaired by Mr. Schimmelpennink. Our board of directors believes that separation of the positions of chairperson of our board of directors and Chief Executive Officer reinforces the independence of our board of directors from management, creates an environment that encourages objective oversight of management's performance and enhances the effectiveness of our board of directors as a whole. As such, Mr. Stengone serves as our President and Chief Executive Officer while Mr. Schimmelpennink serves as the chairperson of our board of directors but is not an officer of the Company. Our board of directors has determined that maintaining the independence of the Company's directors and managing the composition and function of the board of directors' committees help maintain the board of directors' strong, independent oversight of management.

Our non-employee directors meet regularly in executive session without the presence of management or any non-independent directors.

In addition, our Audit, Compensation and Nominating and Corporate Governance Committees, which oversee critical matters such as the integrity of our financial statements, the compensation of executive management, the selection and evaluation of directors, the development and implementation of corporate governance policies, and the oversight of the Company's compliance with laws and regulations, each consist entirely of independent directors. Our board of directors will continue to periodically review our leadership structure and may make such changes in the future as it deems appropriate.

Role of the Board in Risk Oversight

One of the key functions of our board of directors is informed oversight of our risk management process. In particular, our board of directors is responsible for monitoring and assessing strategic risk exposure. Our executive officers are responsible for the day-to-day management of the material risks we face. Our board of directors administers its oversight function directly as a whole. Our board of directors will also administer its oversight through various standing committees, which will be constituted prior to the completion of this offering, that address risks inherent in their respective areas of oversight. For example, our audit committee will be responsible for overseeing the management of risks associated with our financial reporting, accounting and auditing matters; our compensation committee will oversee the management of risks associated with our compensation policies and programs; and our nominating and corporate governance committee will oversee the management of risks associated with director independence, conflicts of interest, composition and organization of our board of directors and director succession planning.

Board Committees

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee. Our board of directors may establish other committees to facilitate the management of our business. Our board of directors and its committees will set schedules for meeting throughout the year and can also hold special meetings and act by written consent from time to time, as appropriate. Our board of directors expects to delegate various responsibilities and authority to committees as generally described below. The committees will regularly report on their activities and actions to the full board of directors. Each member of each committee of our board of directors will qualify as an independent director in accordance with the listing standards of Nasdaq. Each committee of our board of directors has a written charter approved by our board of directors. Copies of each charter are posted on our website at www.contineum-tx.com under the Investor Relations section. The inclusion of our website address in this prospectus does not include or incorporate by reference the information on our website into this prospectus. Members will serve on these committees until their resignation or until otherwise determined by our board of directors.

Audit Committee

The members of our audit committee are Messrs. Brady and Schimmelpennink, and Ms. Lyons-Williams, each of whom can read and understand fundamental financial statements. Each member of our audit committee is independent under the rules and regulations of the SEC and the listing standards of Nasdaq applicable to audit committee members. Mr. Brady is the chair of the audit committee. Our board of directors has determined that Mr. Brady qualifies as an audit committee financial expert within the meaning of SEC regulations and each member meets the financial sophistication requirements of Nasdaq.

Our audit committee will assist our board of directors with its oversight of the integrity of our financial statements; our compliance with legal and regulatory requirements; the qualifications, independence and performance of the independent registered public accounting firm; the design and implementation of our risk assessment and risk management. Among other things, our audit committee is responsible for reviewing and discussing with our management the adequacy and effectiveness of our disclosure controls and procedures. The audit committee also will discuss with our management and independent registered public accounting firm the annual audit plan and scope of audit activities, scope and timing of the annual audit of our financial statements, and the results of the audit, quarterly reviews of our financial statements and, as appropriate, initiates inquiries into certain aspects of our financial affairs. Our audit committee is responsible for establishing and overseeing procedures for the receipt, retention and treatment of any complaints regarding accounting, internal accounting controls or

auditing matters, as well as for the confidential and anonymous submissions by our employees of concerns regarding questionable accounting or auditing matters. In addition, our audit committee has direct responsibility for the appointment, compensation, retention and oversight of the work of our independent registered public accounting firm. Our audit committee has sole authority to approve the hiring and discharging of our independent registered public accounting firm, all audit engagement terms and fees and all permissible non-audit engagements with the independent auditor. Our audit committee will review and oversee all related person transactions in accordance with our policies and procedures.

Our audit committee operates under a written charter that satisfies the applicable rules of the SEC and the listing standards of Nasdaq. We believe that the composition of our audit committee meets the requirements for independence under current Nasdaq and SEC rules and regulations.

Compensation Committee

The members of our compensation committee are Messrs. Brady and Schimmelpennink, and Ms. Ware. Mr. Brady is the chair of the compensation committee. Each member of our compensation committee is independent under the rules and regulations of the SEC and the listing standards of Nasdaq applicable to compensation committee members. Our compensation committee will assist our board of directors with its oversight of the forms and amount of compensation for our executive officers (including officers reporting under Section 16 of the Exchange Act), the administration of our equity and non-equity incentive plans for employees and other service providers and certain other matters related to our compensation programs. Our compensation committee, among other responsibilities, evaluates the performance of our chief executive officer and, in consultation with him, evaluates the performance of our other executive officers (including officers reporting under Section 16 of the Exchange Act).

Our compensation committee operates under a written charter that satisfies the applicable rules of the SEC and the listing standards of Nasdaq. We believe that the composition of our compensation committee meets the requirements for independence under current Nasdaq and SEC rules and regulations.

Nominating and Corporate Governance Committee

The members of our nominating and corporate governance committee are Ms. Lyons-Williams, and Ms. Ware. Each member of our nominating and governance committee is independent under the rules and regulations of the SEC and the listing standards of Nasdaq applicable to nominating and governance committee members. Ms. Lyons-Williams is the chair of the nominating and corporate governance committee. Our nominating and corporate governance committee will assist our board of directors with its oversight of and identification of individuals qualified to become members of our board of directors, consistent with criteria approved by our board of directors, and selects, or recommends that our board of directors selects, director nominees; develops and recommends to our board of directors a set of corporate governance guidelines and oversees the evaluation of our board of directors.

Our nominating and corporate governance committee operates under a written charter that satisfies the applicable rules of the SEC and the listing standards of Nasdaq. We believe that the composition of our nominating and corporate governance committee meets the requirements for independence under current Nasdaq and SEC rules and regulations.

Under our corporate governance guidelines, which will become effective upon the closing of this offering, our nominating and corporate governance committee will consider various factors when

evaluating the composition of our board of directors, including in no particular order of importance: (a) various and relevant career experience, (b) relevant skills, such as an understanding of the Company's business, (c) financial expertise, (d) diversity, including race, ethnicity, gender, national origin, and geography and (e) local and community ties.

Compensation Committee Interlocks and Insider Participation

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 (or other board committee performing equivalent functions or, in the absence of any such committee, the entire board of directors) of any entity that has one or more executive officers serving on our board of directors or compensation committee.

Code of Conduct

Our board of directors has adopted a code of conduct (the Code of Conduct), which will become effective upon the completion of this offering. The Code of Conduct applies to all of our employees, officers, directors, contractors, consultants, suppliers and agents. The full text of the Code of Conduct is posted on our website at www.contineum-tx.com under the Investor Relations section. We intend to disclose future amendments to, or waivers of, the Code of Conduct, as and to the extent required by SEC regulations, at the same location on our website identified above or in public filings. Information contained on our website is not incorporated by reference into this prospectus, and you should not consider information contained on our website to be part of this prospectus or in deciding whether to purchase shares of our Class A common stock.

Non-Employee Director Compensation

Prior to this offering, we did not have a formal policy with respect to compensation payable to our non-employee directors. Other than as set forth in the table and described more fully below, we did not pay any compensation, including equity awards, to any of our non-employee directors in the last completed fiscal year ended December 31, 2023.

2023 Director Compensation

The table below shows the total compensation that we paid to Ms. Lyons-Williams and Mr. Schimmelpennink, our only non-employee directors who received compensation, during the last completed fiscal year ended December 31, 2023.

Name	Fees Earned or Paid in Cash ($)	Option Awards(1) ($)	All Other Compensation ($)	Total ($)
Lori Lyons-Williams	25,000	—	—	25,000
Evert Schimmelpennink	23,819	—	—	23,819

(1) As of December 31, 2023, Mr. Schimmelpennink and Ms. Lyons-Williams held 29,411 and 29,478 options to purchase shares of our Class A common stock, respectively.

In connection with her commencement of service on our board of directors in August 2020, Ms. Lyons-Williams received an option grant for 26,799 shares of our Class A common stock. Ms. Lyons-Williams received an additional option grant for 2,679 shares of our Class A common stock in March 2021. In connection with his commencement of service on our board of directors in January

2022, Mr. Schimmelpennink received an option grant for 29,411 shares of our Class A common stock. Mr. Schimmelpennink received an additional option grant for 2,679 shares of our Class A common stock in March 2024. In connection with her commencement of service on our board of directors in March 2024, Ms. Ware received an option grant for 29,479 shares of our Class A common stock. Mr. Brady also received an option grant for 29,479 shares of our Class A common stock in March 2024. Each of the above described options vested or will vest, as applicable, over a period of 24 months in equal monthly installments, subject to his or her continued service as a member of our board. The options granted in March 2024 to Messrs. Schimmelpennink and Brady and Ms. Ware will vest in full in the event of a "change in control" (as defined in the 2012 Plan). Mr. Schimmelpennink, Ms. Lyons-Williams and Ms. Ware also receive a cash fee of $25,000 annually, which is paid quarterly in arrears.

Directors who are also our employees or officers receive no additional compensation for their service as directors. See the section titled "Executive Compensation" elsewhere in this prospectus for additional information about the compensation Mr. Stengone, our Chief Executive Officer and President, received during our fiscal year ended December 31, 2023.

We reimburse our non-employee directors for expenses associated with attending meetings of our board of directors and its committees.

Upon the closing of this offering, our non-employee director compensation program will become effective, and will replace all previous arrangements entered into with our non-employee directors. The program will provide for the following cash compensation:

Position	Annual Retainer
Board Member	$40,000
plus (as applicable):	
Board Chair	$30,000
Audit Committee Chair	$15,000
Compensation Committee Chair	$10,000
Nominating and Corporate Governance Committee Chair	$ 8,000
Audit Committee Member	$ 7,500
Compensation Committee Member	$ 5,000
Nominating and Corporate Governance Committee Member	$ 4,000

In addition, the compensation program for our non-employee directors following our initial public offering will include both an initial equity award upon joining our board of directors and an annual equity award in connection with each annual meeting of our stockholders.

- Initial Equity Award – Each new non-employee director joining our board of directors will receive an option grant under our 2024 Plan for a number of shares of our Class A common stock that is equivalent to 0.090% of our total shares of Class A common stock outstanding, including Class A common stock issuable upon conversion of shares of Class B common stock, as of the date of grant, subject to the director compensation limit set forth in the 2024 Plan. Subject to the non-employee director's continuous service, 1/3rd of the option grant will vest on the one year anniversary of the non-employee director's appointment to our board of directors, and the remainder will vest in 24 equal monthly installments thereafter.
- Annual Equity Award -Following the conclusion of each regular annual meeting of stockholders, each continuing non-employee director will receive an option grant under our 2024 Plan for a number of shares of our Class A common stock that is equivalent to 0.045% of our total shares of Class A common stock outstanding, including Class A common stock issuable upon conversion of shares of Class B common stock, as of the date of such regular annual meeting

of stockholders, subject to the director compensation limit set forth in the 2024 Plan. Subject to the non-employee director's continuous service, the option will vest in full on the earlier of (i) the one-year anniversary of the date of grant or (ii) the next regular annual meeting of stockholders.

The awards will also vest in full in the event of a "change in control" (as defined in our 2024 Plan).

EXECUTIVE COMPENSATION

Our named executive officers, which consist of our principal executive officer and our two other most highly compensated officers for our fiscal year ended December 31, 2023, are:

- Carmine Stengone, President and Chief Executive Officer;
- Daniel S. Lorrain, Ph.D., Chief Science Officer; and
- Peter T. Slover, Chief Financial Officer.

This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt following the completion of this offering may differ materially from the currently planned programs summarized in this discussion.

As noted above, we are an "emerging growth company," as that term is used in the JOBS Act, and have elected to comply with the reduced compensation disclosure requirements available to emerging growth companies under the JOBS Act.

2023 Summary Compensation Table

The following table shows information regarding the compensation of our named executive officers for the fiscal year ended December 31, 2023.

Name and Principal Position	Year	Salary ($)	Bonus ($)(1)	Option Awards ($)(2)	Non-Equity Incentive Plan Compensation ($)(3)	All Other Compensation ($)(4)	Total ($)
Carmine Stengone							
President and Chief Executive Officer	2023	515,595	55,000	1,525,000	207,527	12,177	2,315,299
Daniel S. Lorrain, Ph.D.							
Chief Science Officer	2023	371,708	55,000	1,220,000	126,567	11,749	1,785,024
Peter T. Slover							
Chief Financial Officer	2023	375,178	55,000	457,500	127,748	11,769	1,027,195

(1) The amounts reported in this column represent discretionary cash performance bonuses paid to each of the named executive officers in the amount of $27,500 on each of April 28, 2023 and October 31, 2023, which were awarded in connection with the execution of the J&J License Agreement in 2023. Each named executive officer is eligible to receive two additional cash bonus payments related to the execution of the J&J License Agreement, each in the amount of $27,500, which will be paid, subject to their continued employment through each such date, in April and October 2024.

(2) The amounts reported in this column reflect the aggregate grant date fair value of the option awards granted to our named executive officers in 2023, calculated in accordance with FASB ASC Topic 718. The assumptions used in calculating the grant date fair value of the options reported in this column are included in the financial statements for the year ended December 31, 2023 included elsewhere in this registration statement.

(3) Represents amounts earned by our named executive officers under our short-term incentive program, based on our achievement of certain corporate performance goals and the named executive officer's individual performance during 2023 and which were paid in January 2024.

(4) Includes, for each named executive officer, $9,900 in employer matching contributions under our 401(k) plan, as well as the named executive officer's cell phone allowance.

Narrative Explanation of Compensation Arrangements with our Named Executive Officers

Base Salaries and Annual Incentive Opportunities

The base salaries of our named executive officers are reviewed from time to time and adjusted when our board of directors or compensation committee determines an adjustment is appropriate. For our 2023 fiscal year, the base salary was $515,595 for Mr. Stengone, $371,708 for Dr. Lorrain, and $375,178 for Mr. Slover.

Each of our named executive officers is eligible to earn an annual incentive bonus, with such bonus awarded based on individual performance goals, as well as corporate goals related to our product development and advancement of clinical trials established by our Chief Executive Officer and approved by our board of directors. During our fiscal year ended December 31, 2023, our named executive officers were eligible to earn annual incentive bonuses based on our success in operating our 2023 corporate operating plan, which included goals relating to our clinical and discovery objectives, our partnering, licensing and collaboration programs, and our financing and talent recruiting and retention objectives. We require that participants continue to be employed through the payment date to receive a bonus. For our 2023 fiscal year, the target bonus rate (as a percentage of base salary) was 35% for Mr. Stengone and 30% for each of Dr. Lorrain and Mr. Slover. Based on our 2023 performance, our board of directors awarded payouts under our annual incentive program in the amounts of $207,527, $126,567, and $127,748 to Mr. Stengone, Dr. Lorrain, and Mr. Slover, respectively.

In addition, each named executive officer received cash bonuses in an aggregate amount equal to $55,000, which were paid 50% in each of April 2023 and October 2023 in connection with the execution of the J&J License Agreement in 2023. Each named executive officer is also eligible to receive two additional cash bonus payments related to the execution of the J&J License Agreement, each in the amount of $27,500, which will be paid, subject to their continued employment through each such date, in April and October 2024.

Equity Compensation

We offer stock options to our employees, including our named executive officers, as the long-term incentive component of our compensation program. Our stock options allow our employees to purchase shares of our Class A common stock at a price equal to the fair market value of our Class A common stock on the date of grant. In the past, our board of directors or compensation committee has determined the fair market value of our Class A common stock based on various inputs impacting the valuation of our Class A common stock, including valuation reports prepared by third party valuation firms. Generally, our stock option grants vest over a period of four years from the date of grant, with 25% of the total number of option shares vesting on the first anniversary of the award and the remaining option shares vesting in equal monthly installments over the following 36 months, subject to the recipient’s continued service through the applicable vesting date. In October 2023, we granted stock options with respect to 178,660 shares, 142,928 shares and 53,598 shares to Mr. Stengone, Dr. Lorrain and Mr. Slover, respectively, which are scheduled to vest over our standard four-year vesting schedule.

Employee Benefits and Perquisites

Our named executive officers are eligible to participate in our health and welfare plans to the same extent as our full-time employees generally. We generally do not provide our named executive officers with perquisites or other personal benefits.

Retirement Benefits

All of our full-time employees, including our named executive officers, are eligible to participate in our 401(k) retirement plan (401(k) Plan), which is a retirement savings defined contribution plan

designed to comply with Section 401(a) of the Internal Revenue Code of 1986, as amended (the Code). Pursuant to our 401(k) Plan, employees may elect to defer up to 90% of their eligible compensation into the plan on a pre-tax or after-tax (Roth) basis, up to the statutorily prescribed annual limit and to have the amount of this reduction contributed to our 401(k) Plan. We provide a non-elective safe harbor contribution of 3% on eligible compensation up to the statutory prescribed annual limit.

Employment Arrangements with Named Executive Officers

We have entered into executive employment agreements with each of Messrs. Stengone and Slover and Dr. Lorrain which set forth their base salaries, annual incentive bonus targets and other terms of their employment. The employment agreements provide for at-will employment and do not provide for severance payments other than in the context of a termination of employment without cause or a resignation for good reason (as such terms are defined in the executive employment agreements), as described in “Severance and Change in Control Benefits” below.

Outstanding Equity Awards at 2023 Fiscal Year-End

The following table sets forth information regarding each unexercised option held by each of our named executive officers as of December 31, 2023.

The vesting schedule applicable to each outstanding option is described in the footnotes to the table below.

Please see the section titled “Severance and Change in Control Benefits” below for additional information regarding the vesting acceleration provisions applicable to the outstanding options held by our named executive officers.

	Option Awards				
Name	Vesting Commencement Date	Number of Securities Underlying Unexercised Options Exercisable (#)(1)	Number of Securities Underlying Unexercised Options Unexercisable (#)(1)	Option Exercise Price ($)	Option Expiration Date
Carmine Stengone	10/8/2019	128,417	—	1.26	11/13/2028
	11/26/2019	289,430	—	1.01	2/24/2030
	3/11/2021	256,713	116,687	8.46	3/15/2031
	9/27/2023	—	178,660	10.81	10/8/2033
Daniel S. Lorrain, Ph.D.	11/26/2019	75,930	—	1.01	2/24/2030
	3/11/2021	177,856	80,843	8.46	3/15/2031
	9/27/2023	—	142,928	10.81	10/8/2033
Peter T. Slover	9/15/2020	144,715(2)	—	1.01	10/5/2030
	3/11/2021	27,022	12,282	8.46	3/15/2031
	9/27/2023	—	53,598	10.81	10/8/2033

(1) 25% of the option shares vest on the one year anniversary of the vesting commencement date, and the remaining option shares vest in 36 equal monthly installments thereafter, provided the officer remains in continuous service through each such vesting date. In addition, if the officer is subject to an involuntarily termination within 30 days prior to or 18 months after a change in control, the option will become fully vested and remain exercisable for the full term of the option.

(2) The option is exercisable prior to vesting. In the event the option is exercised for unvested shares, the shares will remain subject to the Company’s right of repurchase.

Severance and Change in Control Benefits

Pursuant to their executive employment agreements, each of Messrs. Stengone and Slover and Dr. Lorrain are eligible to receive the following severance benefits if we terminate their employment for

reasons other than cause (as such term is defined in the executive employment agreements), death or disability, contingent on the officer executing and not revoking a general release of claims against us and provided such release becomes effective and irrevocable in its entirety following the officer's termination date:

- Continued payment of the officer's base salary for a period of 12 months following the date of termination; and
- Reimbursement for continued benefit coverage pursuant to COBRA for a period of up to 12 months following the date of termination.

In addition, if we terminate the named executive officer without cause or the named executive officer resigns with good reason (as such term is defined in the executive employment agreements), in either event within 30 days prior to or 18 months after a change in control (as such term is defined in the executive employment agreements), and the officer executes (and does not revoke) a general release of claims against us, then the vesting of all then-unvested equity awards held by the officer will be fully accelerated and, in the case of stock options, will remain exercisable for their full term.

Equity Plans

2024 Equity Incentive Plan

Our board of directors and our stockholders adopted and approved our 2024 Plan in March 2024. While our 2024 Plan became effective immediately on adoption, no awards will be made under it until the effective date of the registration statement of which this prospectus is a part. Our 2024 Plan is intended to replace our 2012 Plan. However, awards outstanding under our 2012 Plan will continue to be governed by their existing terms. Our 2024 Plan has the features described below.

Share Reserve. The number of shares of our Class A common stock available for issuance under our 2024 Plan equals the sum of 2,700,000 shares plus up to 3,142,019 shares (i) remaining available for issuance under our 2012 Plan, or (ii) subject to awards granted under our 2012 Plan that are outstanding as of the effective date of the registration statement of which this prospectus is a part that subsequently are forfeited, expire or lapse unexercised or unsettled and any shares issued pursuant to awards granted under the 2012 Plan that are outstanding on the effective date of the registration statement of which this prospectus is a part and that are subsequently forfeited to or reacquired by us. The number of shares reserved for issuance under our 2024 Plan will be increased automatically on the first day of each of our fiscal years, commencing in 2025 and ending in 2034, by a number equal to the lesser of:

- 5% of the shares of common stock outstanding on the last day of the prior fiscal year; or
- the number of shares determined by our board of directors.

In general, to the extent that any awards under our 2024 Plan are forfeited, terminate, expire, are settled for cash or lapse without the issuance of shares, or if we repurchase the shares subject to awards granted under our 2024 Plan, those shares will again become available for issuance under our 2024 Plan, as will shares withheld or tendered to pay the exercise or purchase price of an award or to satisfy tax withholding obligations related to any award.

To the extent permitted under applicable exchange listing standards, any dividend equivalents paid or credited under the 2024 Plan with respect to restricted stock units will not be applied against the number of shares that may be issued under the 2024 Plan, whether or not such dividend equivalents are converted into restricted stock units.

Administration. The compensation committee of our board of directors will administer our 2024 Plan. Subject to the terms of the 2024 Plan and applicable law and listing exchange rules, the compensation committee will have complete discretion to make all decisions relating to our 2024 Plan and outstanding awards, including repricing outstanding options without stockholder approval and modifying outstanding awards in other ways.

Eligibility. Employees, non-employee directors, consultants and advisors will be eligible to participate in our 2024 Plan. However, only employees are eligible to receive incentive stock options.

Under our 2024 Plan, the aggregate grant date fair value of awards granted to our non-employee directors, together with the value of any cash compensation paid to our non-employee directors, may not exceed $750,000 in any one fiscal year, except that the limitation for any newly appointed non-employee directors will instead be $1,000,000 in the fiscal year in which such non-employee director is initially appointed to our board of directors.

Types of Awards. Our 2024 Plan provides for the following types of awards:

- incentive and nonstatutory stock options;
- stock appreciation rights;
- restricted shares; and
- restricted stock units.

Options and Stock Appreciation Rights. The exercise price for options granted under our 2024 Plan may not be less than 100% of the fair market value of our Class A common stock on the grant date. Optionees will be permitted to pay the exercise price in cash or, with the consent of the compensation committee:

- with shares of common stock that the optionee already owns;
- by an immediate sale of shares through a broker approved by us;
- by instructing us to withhold a number of shares otherwise deliverable upon exercise having an aggregate fair market value that does not exceed the exercise price; or
- by other methods permitted by applicable law.

An optionee who exercises a stock appreciation right receives the increase in value of our Class A common stock over the base price. The base price for stock appreciation rights may not be less than 100% of the fair market value of our Class A common stock on the grant date. The settlement value of a stock appreciation right may be paid in cash, shares of our Class A common stock or a combination, as set forth in the underlying award agreement.

Options and stock appreciation rights vest as determined by the compensation committee. Options and stock appreciation rights expire at the time determined by the compensation committee but in no event more than ten years after they are granted. These awards generally expire earlier if the participant's service terminates.

Restricted Shares and Restricted Stock Units. Restricted shares and restricted stock units may be awarded under our 2024 Plan in return for any lawful consideration, and participants who receive restricted shares or restricted stock units generally are not required to pay cash for their awards. In general, these awards will be subject to vesting. Vesting may be based on length of service, the attainment of performance-based milestones or a combination of both, as determined by the compensation committee and set forth in the underlying award agreement.

Settlement of vested restricted stock units may be made in the form of cash, shares of Class A common stock or a combination of both.

Corporate Transactions. In the event we are a party to a merger, consolidation or certain change in control transactions, outstanding awards granted under our 2024 Plan, and all shares acquired under our 2024 Plan, will be subject to the terms of the definitive transaction agreement (or, if there is no such agreement, as determined by our compensation committee). Unless an award agreement provides otherwise, such treatment may include any of the following with respect to each outstanding award:

- the continuation, assumption or substitution of an award by a surviving entity or its parent;
- the cancellation of an award without payment of any consideration;
- the cancellation of the vested portion of an award (and any portion that becomes vested as of the effective time of the transaction) in exchange for a payment equal to the excess, if any, of the value that the holder of each share of our Class A common stock receives in the transaction over (if applicable) the exercise price otherwise payable in connection with the award; or
- the assignment of any reacquisition or repurchase rights held by us in respect of an award of restricted shares to the surviving entity or its parent (with proportionate adjustments made to the price per share to be paid upon exercise of such rights).

The compensation committee is not required to treat all awards, or portions thereof, in the same manner.

The vesting of an outstanding award may be accelerated by the compensation committee upon the occurrence of a change in control, whether or not the award is to be assumed or replaced in the transaction, or in connection with a termination of service following a change in control transaction.

A change in control generally includes:

- any person acquiring beneficial ownership of more than 50% of our total voting power;
- individuals who are members of our board of directors cease for any reason to constitute at least a majority of the members of our board of directors over a 12-month period;
- the sale or other disposition of all or substantially all of our assets; or
- our merger or consolidation after which our voting securities represent 50% or less of the total voting power of the surviving or acquiring entity.

Changes in Capitalization. In the event of certain changes in our capital structure without our receipt of consideration, such as a stock split, reverse stock split or dividend paid in Class A common stock, proportionate adjustments will automatically be made to:

- the maximum number and kind of shares available for issuance under our 2024 Plan, including the maximum number and kind of shares that may be issued upon the exercise of incentive stock options;
- the maximum number and kind of shares covered by, and the exercise price, base price or purchase price, if any, applicable to each outstanding stock award; and
- the maximum number and kind of shares by which the share reserve may increase automatically each year.

In the event that there is a declaration of an extraordinary dividend payable in a form other than our Class A common stock in an amount that has a material effect on the price of our Class A common stock, a recapitalization, a spin-off or a similar occurrence, the compensation committee may make such adjustments to any of the foregoing as it deems appropriate, in its sole discretion.

Amendments or Termination. Our board of directors may amend, or terminate our 2024 Plan at any time. If our board of directors amends our 2024 Plan, it does not need stockholder approval of the amendment unless required by applicable law, regulation or rules. Our 2024 Plan will terminate automatically ten years after the date when our board of directors adopted our 2024 Plan.

2012 Equity Incentive Plan

Our board of directors adopted our 2012 Plan in July 2012, and it was also approved by our stockholders in July 2012. Our 2012 Plan was most recently amended by our board of directors in February 2021, and approved by our stockholders in February 2021. No further awards will be made under our 2012 Plan after this offering; however, awards outstanding under our 2012 Plan will continue to be governed by their existing terms.

Share Reserve. As of December 31, 2023, we have reserved 3,429,327 shares of our Class A common stock for issuance under our 2012 Plan, all of which may be issued as incentive stock options. As of December 31, 2023, options to purchase 2,674,405 shares of our Class A common stock, at exercise prices ranging from $1.01 to $11.48 per share, or a weighted-average exercise price of $5.91 per share were outstanding under our 2012 Plan, and 502,491 shares of our Class A common stock remained available for future issuance. Shares subject to awards that are forfeited, expire or terminate without the issuance of shares, shares that are issued but forfeited due to a failure to vest, as well as shares applied to payment of the purchase price or exercise price of an award or in satisfaction of withholding taxes will again become available for issuance under our 2012 Plan or, following consummation of this offering, under our 2024 Plan.

Administration. Our board of directors has administered our 2012 Plan since its adoption; however, following this offering, the compensation committee of our board of directors will generally administer our 2012 Plan. The administrator has complete discretion to make all decisions relating to our 2012 Plan and outstanding awards under the 2012 Plan.

Eligibility. Employees, non-employee members of our board of directors and consultants are eligible to participate in our 2012 Plan. However, only employees are eligible to receive incentive stock options.

Types of Awards. Our 2012 Plan provides for the following types of awards granted with respect to shares of our Class A common stock:

- incentive and nonstatutory stock options;
- stock appreciation rights;
- restricted shares;
- restricted stock units; and
- other stock awards.

Options and Stock Appreciation Rights. The exercise price for options granted under our 2012 Plan is determined by our board of directors, but generally may not be less than 100% of the fair market value of our Class A common stock on the grant date. Optionees may pay the exercise price in cash or cash equivalents or by one, or any combination of, the following forms of payment, as permitted by the administrator in its sole discretion:

- by a broker assisted sale pursuant to a program developed under Regulation T;

- surrender of shares of Class A common stock that the optionee already owns;
- if the option is a nonstatutory stock option, by a "net exercise" arrangement pursuant to which the Company will withhold a whole number of shares of Class A common stock having an aggregate fair market value no greater than the aggregate exercise price, or the sum of such exercise price plus all or a portion of the minimum amount required to be withheld under applicable law;
- according to a deferred payment or similar arrangement with the optionee; or
- any other form of legal consideration that may be acceptable to our board of directors.

Options vest as determined by the administrator. In general, we have granted options that vest over a four-year period. Options expire at the time determined by the administrator, but in no event more than ten years after they are granted, and generally expire earlier if the optionee's service terminates.

Stock appreciation rights are evidenced by stock appreciation right agreements adopted by the plan administrator. The plan administrator determines the strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of our Class A common stock on the date of grant. Upon the exercise of a stock appreciation right, we will pay the participant an amount in cash or stock equal to (1) the excess of the per share fair market value of our Class A common stock on the date of exercise over the strike price, multiplied by (2) the number of shares of Class A common stock with respect to which the stock appreciation right is exercised. A stock appreciation right granted under the 2012 Plan vests at the rate specified in the stock appreciation right agreement as determined by the plan administrator. The plan administrator determines the term of stock appreciation rights granted under the 2012 Plan, up to a maximum of ten years.

Restricted Shares. Restricted shares may be awarded or sold under our 2012 Plan in return for cash or cash equivalents or, as permitted by the plan administrator in its sole discretion, in exchange for services rendered to us, by delivery of a full-recourse promissory note or through any other means permitted by applicable law. Restricted shares vest as determined by the plan administrator. The award agreement evidencing a restricted share award may provide that any dividends paid on such restricted shares will be subject to the same vesting and forfeiture restrictions as apply to the shares subject to such award.

Restricted Stock Units. Restricted stock units are evidenced by restricted stock unit agreements adopted by the plan administrator. Restricted stock units may be granted in consideration for any form of legal consideration or for no consideration. A restricted stock unit may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit. Any such dividend equivalents will be subject to the same terms and conditions as the underlying restricted stock units to which they related. Restricted stock units may be subject to vesting as determined by the plan administrator.

Other Stock Awards. Other stock awards are awards valued in whole or in part by reference to, or otherwise based on, shares of our Class A common stock. The administrator has the authority to determine the persons to whom other stock awards will be granted and the terms and conditions applicable to such awards.

Corporate Transactions. In the event that we are a party to certain mergers or consolidations or in the event of a sale of all or substantially all of our stock or assets, awards granted under our 2012

Plan will be subject to the agreement governing such transaction or, in the absence of such agreement, in the manner determined by the plan administrator. Such treatment may include, without limitation, one or more of the following with respect to outstanding awards:

- the continuation, assumption or substitution of an award by the surviving entity or its parent;
- the assignment of any reacquisition or repurchase rights held by us with respect to an award to the surviving corporation or acquiring corporation;
- the acceleration of the vesting, in whole or in part, of any award (and, if applicable, the time at which the award may be exercised) to a date prior to the effective time of such transaction as the plan administrator will determine (or, if the plan administrator does not determine such a date, to the date that is five days prior to the effective date of the transaction), with such award terminating if not exercised (if applicable) at or prior to the effective time of the transaction;
- the lapse of any reacquisition or repurchase rights held by us with respect to the award;
- the cancellation of the award, to the extent not vested or not exercised prior to the effective time of the transaction, in exchange for such cash consideration, if any, as the administrator, in its sole discretion, may consider appropriate; and
- the payment, in such form as may be determined by the plan administrator equal to the excess, if any, of (A) the value of the property the holder of the award would have received upon the exercise of the award, over (B) any exercise price payable by such holder in connection with such exercise.

The plan administrator is not obligated to treat all awards in the same manner. The plan administrator has the discretion, at any time, to provide that an award under our 2012 Plan will vest on an accelerated basis in connection with a corporate transaction or to amend or modify an award so long as such amendment or modification is not inconsistent with the terms of the 2012 Plan or would not result in the impairment of a participant's rights without the participant's consent.

Changes in Capitalization. In the event of certain specified changes in the capital structure of our Class A common stock, such as a stock split, reverse stock split, stock dividend, reclassification or any other increase or decrease in the number of issued shares of stock effective without receipt of consideration by us, proportionate adjustments will automatically be made in (i) the number and kind of shares available for future grants under our 2012 Plan, (ii) the number and kind of shares covered by each outstanding option and all restricted shares, (iii) the exercise price per share subject to each outstanding option and (iv) any repurchase price applicable to shares granted under our 2012 Plan.

Amendments or Termination. The plan administrator may at any time amend, suspend or terminate our 2012 Plan, subject to stockholder approval in the case of an amendment that (i) increases the number of shares available for issuance, (ii) materially changes the class of persons eligible to receive stock awards under the 2012 Plan, (iii) materially increases the benefits to participants under the 2012 Plan or materially reduces the price at which shares may be issued or purchased under the 2012 Plan, (iv) materially extends the term of the 2012 Plan, or (v) expands the types of stock awards available for issuance under the 2012 Plan. Our 2012 Plan will terminate upon the completion of this offering, but as noted above, awards outstanding under our 2012 Plan will remain outstanding and will continue to be governed by their existing terms.

Employee Stock Purchase Plan

General. Our board of directors and stockholders adopted and approved our 2024 ESPP in March 2024. Our 2024 ESPP became effective on the effective date of the registration statement of which this prospectus is a part. Our 2024 ESPP is intended to qualify under Section 423 of the Internal Revenue Code. Our 2024 ESPP has the features described below.

Share Reserve. 280,000 shares of our Class A common stock have been reserved for issuance under our 2024 ESPP. The number of shares reserved for issuance under our 2024 ESPP will automatically be increased on the first day of each of our fiscal years, commencing in 2025 and ending in 2044, by a number equal to the lesser of:

- 280,000 shares;
- 1% of the shares of common stock outstanding on the last day of the prior fiscal year; or
- the number of shares determined by our board of directors.

The number of shares reserved under our 2024 ESPP will automatically be adjusted in the event of a stock split, stock dividend or a reverse stock split (including an adjustment to the per-purchase period share limit).

Administration. The compensation committee of our board of directors will administer our 2024 ESPP.

Eligibility. All of our employees will be eligible to participate in our ESPP, although the administrator may exclude certain categories of employees from an offering period, as permitted by applicable law, including employees employed for less than two years, working less than 20 hours per week, who are employed less than five months per year, or are highly compensated employees. Eligible employees may begin participating in our 2024 ESPP at the start of any offering period.

Offering Periods. Each offering period will last a number of months determined by the compensation committee, not to exceed 27 months (or such other period as may be imposed under applicable tax law). A new offering period will begin periodically, as determined by the compensation committee. Offering periods may overlap or may be consecutive.

Amount of Contributions. Our 2024 ESPP will permit each eligible employee to purchase Class A common stock through payroll deductions. Each employee's payroll deductions may not exceed 15% of the employee's cash compensation. Each participant may purchase up to the number of shares determined by our board of directors on any purchase date, not to exceed 5,000 shares. The value of the shares purchased in any calendar year may not exceed $25,000. Participants may withdraw their contributions at any time before stock is purchased.

Purchase Price. The price of each share of Class A common stock purchased under our 2024 ESPP will be equal to 85% of the lower of the fair market value per share of Class A common stock on the first day of the applicable offering period or the fair market value per share of Class A common stock on the purchase date.

Other Provisions. Employees may end their participation in our 2024 ESPP at any time. Participation ends automatically upon termination of employment with us. If we experience a change in control, any offering period then in effect will end and shares will be purchased with the payroll deductions accumulated to date by participating employees unless the acquirer continues, assumes or substitutes for the rights of the participants in the offering period. Our board of directors or our compensation committee may amend or terminate our 2024 ESPP at any time. The 2024 ESPP will terminate automatically 20 years after its adoption by our board of directors, unless (i) the 2024 ESPP is extended by our board of directors and (ii) the extension is approved within 12 months by a vote of our stockholders.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions since January 1, 2021 to which we have been a party in which the amount involved exceeded the lesser of $120,000 or one percent of the average of our total assets at year end for the last two completed fiscal years and in which any of our executive officers, directors or beneficial holders of more than 5% of our capital stock (or any immediate family member of, or person sharing the household with, any of these individuals or entities), which we collectively refer to as a related person, had or will have a direct or indirect material interest, other than compensation arrangements which are described in the sections of this prospectus titled “Management—Director Compensation” and “Executive Compensation.” We believe that all of these transactions were on terms as favorable as could have been obtained from unrelated third parties.

Sales of Securities

Series C Preferred Stock Financing

From February 2021 until August 2023, we issued and sold an aggregate of 9,349,906 shares of our Series C preferred stock at a cash purchase price of $15.00 per share for an aggregate purchase price of approximately $140.2 million (the Series C Financing).

These shares of Series C preferred stock will convert into an aggregate of 7,616,568 shares of our Class A common stock and 1,733,338 shares of our Class B common stock upon the completion of this offering.

The following table summarizes purchases of shares of our Series C preferred stock by our executive officers, directors and holders of more than five percent of our capital stock:

Investor	Affiliated Director(s) or Officer(s)	Shares of Series C Preferred Stock	Total Purchase Price
Entities affiliated with Baker Brothers(1)		1,733,338	$ 26,000,001
Entities affiliated with Versant Ventures(2)	Clare Ozawa; Paul Grayson	466,667	$ 6,999,998
Entities affiliated with Sectoral Asset Management(3)	Stefan Larson	372,866	$ 5,593,002
JJDC		1,666,673	$ 24,999,999

(1) Entities affiliated with Baker Brothers that purchased shares of our Series C preferred stock include (i) 667, L.P. and (ii) Baker Brothers Life Sciences, L.P.
(2) Entities affiliated with Versant Ventures that purchased shares of Series C preferred stock include Versant Vantage I, L.P. Clare Ozawa is a member of our board of directors and a managing director of Versant Ventures. Paul Grayson served on our board of directors until his resignation in November 2023. Dr. Ozawa submitted a resignation letter, which became effective immediately prior to the effectiveness of the registration statement of which this prospectus forms a part.
(3) Entities affiliated with Sectoral Asset Management that purchased shares of Series C preferred stock include New Emerging Medical Opportunities Fund IV SCSp and Sectoral DC 10 Limited. Stefan Larson is a member of our board of directors and a partner of Sectoral Asset Management. Dr. Larson submitted a resignation letter, which became effective immediately prior to the effectiveness of the registration statement of which this prospectus forms a part.

Agreements with Stockholders

Investor Rights Agreement

We are party to an amended and restated investor rights agreement (the Investors’ Rights Agreement) with certain holders of our capital stock, including (i) entities affiliated with Versant

Ventures, (ii) entities affiliated with Baker Brothers, (iii) entities affiliated with Sectoral Asset Management, and (iv) JJDC. Under our Investors' Rights Agreement, certain holders of our capital stock have the right to demand that we file a registration statement or request that their shares of our capital stock be covered by a registration statement that we are otherwise filing. See the section titled "Description of Capital Stock—Registration Rights" elsewhere in this prospectus for additional information regarding these registration rights.

Voting Agreement

We are party to an amended and restated voting agreement (the Voting Agreement) with certain holders of our capital stock, including (i) entities affiliated with Versant Ventures, (ii) entities affiliated with Baker Brothers, (iii) entities affiliated with Sectoral Asset Management, (iv) JJDC, (v) Mr. Stengone, (vi) Mr. Slover, (vii) Dr. Lorrain, (viii) Dr. Huhn, and (ix) Dr. Ozawa. Under our Voting Agreement, certain holders of our capital stock have agreed as to the manner in which they will vote their shares of our capital stock on certain matters, including with respect to the election of directors. The Voting Agreement will terminate upon the completion of this offering, at which time there will be no further contractual obligations regarding the manner in which shares are voted with respect to the election of our directors.

Right of First Refusal and Co-Sale Agreement

We are party to an amended and restated first refusal and co-sale agreement (the First Refusal and Co-Sale Agreement) with certain holders of our capital stock, including (i) entities affiliated with Versant Ventures, (ii) entities affiliated with Baker Brothers, (iii) entities affiliated with Sectoral Asset Management, (iv) JJDC, (v) Mr. Stengone, (vi) Mr. Slover, (vii) Dr. Lorrain, (viii) Dr. Huhn, and (ix) Dr. Ozawa. Under our First Refusal and Co-Sale Agreement, certain holders of our capital stock have the right of first refusal and co-sale relating to the shares of our common stock held by the parties to the agreement. Upon the completion of this offering our First Refusal and Co-Sale Agreement will terminate.

Agreements with Baker Brothers

On July 9, 2021, we entered into a registration rights agreement with Baker Brothers (the Baker Registration Rights Agreement), pursuant to which, Baker Brothers is, subject to certain limitations, entitled to certain registration rights. These registration rights include the right to demand that we file with the SEC a Form S-3 registration statement covering the registration of their shares of Class A common stock for resale, subject to certain conditions, as well as certain rights to an underwritten public offering, to effect the sale of their common stock for sale. See the section titled "Description of Capital Stock—Registration Rights–Baker Registration Rights Agreement" elsewhere in this prospectus for additional information regarding the registration rights available to Baker Brothers under the Baker Registration Rights Agreement.

On July 9, 2021, we entered into an amended letter agreement (the Letter Agreement) with Baker Bros. Advisors LP (BBA), the management company and investment advisor to Baker Brothers. Pursuant to the Letter Agreement, during the period beginning at the closing of this offering and for the three years thereafter, and as long as Baker Brothers and their affiliates, collectively, beneficially own at least 75% of our Series C preferred stock purchased by Baker Brothers in our Series C Financing, or such number of shares of our Class A common stock issued upon conversion of such number of shares of Series C preferred stock (in either case, as adjusted for any stock split, stock dividend, combination, or other recapitalization or reclassification or similar transaction), at any time (and from time to time) that Baker Brothers and their affiliates, collectively, beneficially own at least 2% of our then outstanding voting power we will have the obligation to support the nomination of, and to cause

our board of directors to include in the slate of nominees recommended to our stockholders for election, subject to the requirements of fiduciary duties under applicable law, one individual designated by BBA (the Baker Designee) unless a Baker Designee is already serving on our board of directors and the term of such Baker Designee as a director on the board of directors does not expire at such stockholder election. If a majority of our disinterested directors reasonably and in good faith determines that such Baker Designee would not be qualified to serve as our director under law, rules of the stock exchange on which our shares are listed, our amended and restated bylaws, or any of our company policies, we may notify Baker Brothers sufficiently in advance of the date on which the proxy materials related to such Baker Designee are to be mailed, and Baker Brothers shall propose a replacement Baker Designee. We refer to the period that Baker Brothers has a right to designate a Baker Designee herein as the Baker Nominating Period. If a Baker Designee resigns his or her seat on our board of directors or is removed or does not become a director for any reason, the vacancy will be filled by the election or appointment of another Baker Designee as soon as reasonably practicable, subject to compliance with applicable laws, rules and regulations. Further, pursuant to the terms of the Letter Agreement, we will have the obligation to invite one board of directors observer designee of BBA, to attend all meetings of our board of directors and all meetings of the committees of our board of directors as a nonvoting observer.

J&J License Agreement

In February 2023, we entered into the J&J License Agreement with J&J, pursuant to which we granted J&J an exclusive, worldwide license to develop, manufacture, and commercialize PIPE-307 in all indications.

J&J is generally responsible for all development, manufacturing, and commercialization activities for PIPE-307. Upon J&J deciding to conduct a first Phase 3 clinical trial for a product using PIPE-307, we have an opt-in right to fund a portion of all Phase 3 and subsequent development costs for PIPE-307, with such costs capped annually. If we opt to fund such development costs, then the royalties we are eligible to receive will increase by one to two percentage points. Pursuant to the terms of the J&J License Agreement, we received an upfront payment of $50.0 million. We are also eligible to receive approximately $1.0 billion in non-refundable, non-creditable milestone payments. Additionally, we are eligible to receive tiered royalties in the low-double digit to high-teen percent range on net sales of products containing PIPE-307. See the section titled “Business–License and Collaboration Agreements–J&J License Agreement” for more information related to the J&J License Agreement.

Employment Arrangements

Kym Lorrain, the wife of Dr. Lorrain, our Chief Science Officer, is currently employed as an Assistant Director. Her base salary, incentive compensation and employee benefits are comparable to those offered to similarly situated employees of Contineum and were approved by our Compensation Committee, which is comprised entirely of independent directors.

Indemnification Agreements

We have entered, and intend to continue to enter, into separate indemnification agreements with each of our directors and executive officers, in addition to the indemnification provided for in our amended and restated certificate of incorporation and amended and restated bylaws. The indemnification agreements and our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon the completion of this offering require us to indemnify our directors, executive officers and certain controlling persons to the fullest extent permitted by Delaware law.

Related Party Transaction Policy

Our board of directors has adopted a formal written policy providing that we are not permitted to enter into any transaction that exceeds the lower of $120,000 or 1% of the average of our total assets at year end for the previous two completed fiscal years in any given year and in which any related person has a direct or indirect material interest without the consent of our audit committee. Our audit committee will have the primary responsibility for reviewing and approving or disapproving such "related party transactions." The charter of our audit committee will provide that our audit committee shall review and approve in advance any related party transaction. In approving or rejecting any such transaction, our audit committee is to consider the relevant facts and circumstances available and deemed relevant to our audit committee, including whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related person's interest in the transaction.

All of the transactions described in this section were entered into prior to the adoption of this policy. Although we have not had a written policy for the review and approval of transactions with related persons, our board of directors has historically reviewed and approved any transaction where a director or officer had a financial interest, including the transactions described above. Prior to approving such a transaction, the material facts as to relationship or interest of the relevant director, officer or holder of five percent or more of any class of our voting securities in the agreement or transaction was disclosed to our board of directors. Our board of directors took this information into account when evaluating the transaction and in determining whether such transaction was fair to us and in the best interest of all our stockholders.

PRINCIPAL STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of our common stock as of December 31, 2023 and as adjusted to reflect the sale of Class A common stock offered by us in this offering, for:

- each of the named executive officers;
- each of our directors;
- all of our executive officers and directors as a group; and
- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock.

We have determined beneficial ownership in accordance with the rules of the SEC. Except as indicated in the footnotes below, we believe, based on the information furnished to us, that the persons and entities named in the table below have sole voting and investment power with respect to all shares of common stock that they beneficially own, subject to applicable community property laws.

Applicable percentage ownership is based on 16,522,452 shares of our Class A common stock outstanding as of December 31, 2023, after giving effect to (i) the conversion of all outstanding shares of preferred stock as of that date into an aggregate of 15,906,236 shares of our common stock consisting of 14,172,898 shares of our Class A common stock and 1,733,338 shares of our Class B common stock and (ii) the exclusion of shares of Class A common stock, legally issued upon the early exercise of certain stock options, which are subject to service conditions and rights of repurchase that were outstanding as of December 31, 2023. For purposes of computing percentage ownership after this offering, we have adjusted for the issuance of 6,875,000 shares of Class A common stock in this offering and assumed that (a) the underwriters will not exercise their option to purchase up to 1,031,250 additional shares of our Class A common stock; and (b) none of our executive officers, directors or stockholders who beneficially own more than 5% of our common stock will participate in this offering. In computing the number of shares of common stock beneficially owned by a person or entity and the percentage ownership of that person or entity, we deemed to be outstanding all shares of common stock subject to options held by that person or entity that are currently exercisable or that will become exercisable within 60 days of December 31, 2023. We did not deem these shares outstanding, however, such shares were included for the purpose of computing the percentage ownership of any other person or entity.

Upon the closing of this offering, each outstanding share of our preferred stock, will automatically convert into shares of Class A common stock in accordance with the provisions of our amended and restated certificate of incorporation, with the exception of certain outstanding shares of our preferred stock owned by entities affiliated with or managed by Baker Bros., which shares will automatically convert into an aggregate of 1,733,338 shares of Class B common stock, and other shares of our preferred stock held by stockholders who may elect, prior to the closing of this offering, to convert shares of preferred stock they hold into shares of Class B common stock.

Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o Contineum Therapeutics, Inc., 10578 Science Center Drive, Suite 200, San Diego, CA 92121.

	Number of Shares Beneficially Owned Prior to this Offering		Percentage Shares Beneficially Owned			
			Class A Common Stock		Class B Common Stock	
Name of Beneficial Owner	Class A Common Stock	Class B Common Stock	Prior to this Offering	After this Offering	Prior to this Offering	After this Offering
Named Executive Officers and Directors:						
Carmine Stengone(1)	701,731	—	4.1	2.9	—	—
Daniel S. Lorrain, Ph.D.(2)	453,474	—	2.7	1.9	—	—
Peter Slover(3)	152,270	—	*	*	—	—
Todd R. Brady	—	—	—	—	—	—
Stefan M. Larson, Ph.D.(4)	950,886	—	5.8	4.1	—	—
Lori M. Lyons-Williams(5)	29,478	—	*	*	—	—
Evert Schimmelpennink(6)	29,411	—	*	*	—	—
Clare R. Ozawa, Ph.D.(7)	3,222,674	—	19.4	13.7	—	—
Olivia Ware	—	—	—	—	—	—
All executive officers and directors as a group (10 persons)(8)	6,515,920	—	31.9	23.3	—	—
Other 5% Stockholders:						
Entities affiliated with Versant Ventures(9)	5,316,663	—	32.2	22.7	—	—
Entities affiliated with Baker Brothers(10)	—	1,733,338	—	—	100	100
Entities affiliated with Sectoral Asset Management(11)	950,886	—	5.8	4.1	—	—
JJDC(12)	1,666,673	—	10.1	7.1	—	—

* Represents beneficial ownership of less than one percent (1%).

(1) Represents 701,731 shares of Class A common stock held by Mr. Stengone, of which 690,119 shares of Class A common stock are subject to options that are exercisable within 60 days of December 31, 2023.

(2) Represents 453,474 shares of Class A common stock consisting of (i) 440,327 shares of Class A Common Stock held by Dr. Lorrain, of which 264,565 shares of Class A common stock are subject to options that are exercisable within 60 days of December 31, 2023 and (ii) 13,147 shares of Class A Common Stock held by Kym Lorrain, of which 9,574 shares of Class A common stock are subject to options that are exercisable within 60 days of December 31, 2023. Kym Lorrain is the wife of Dr. Lorrain.

(3) Represents 152,270 shares of Class A common stock that are subject to options held by Mr. Slover that are exercisable within 60 days of December 31, 2023.

(4) Represents 800,887 shares of Class A common stock beneficially held by New Emerging Medical Opportunities IV SCSp and 149,999 shares of Class A common stock beneficially held by Sectoral DC 10 Limited. Dr. Larson, a member of our board of directors, is partner of both New Emerging Medical Opportunities IV SCSp and Sectoral DC 10 Limited and may be deemed to be a beneficial owner of the common shares held by both New Emerging Medical Opportunities IV SCSp and Sectoral DC 10 Limited. Dr. Larson disclaims beneficial ownership of these securities, except to the extent of his pecuniary interest therein. Dr. Larson submitted a resignation letter, which became effective immediately prior to the effectiveness of the registration statement of which this prospectus forms a part. The address for New Emerging Medical Opportunities IV SCSp, Sectoral DC 10 Limited, and Dr. Larson is c/o Sectoral Asset Management Inc., 1010 Sherbrooke St. West, Suite 1610, Montreal QC H3A 2R7 Canada.

(5) Represents 29,478 shares of Class A common stock held by Williams/Lyons-Williams Living Trust, dated May 20, 2015, all of which are subject to options that are exercisable within 60 days of December 31, 2023. Ms. Lyons-Williams, a member of our board of directors, is a trustee of the Williams/Lyons-Williams Living Trust, dated May 20, 2015 and has voting and investment control with respect to these shares.

(6) Represents 29,411 shares of Class A common stock held by Mr. Schimmelpennink, all of which are subject to options that are exercisable within 60 days of December 31, 2023.

(7) Represents (i) 193,628 shares of Class A common stock held by Dr. Ozawa, (ii) 53,598 shares of Class A common stock subject to options held by Dr. Ozawa that are exercisable within 60 days of December 31, 2023, (iii) 2,116,642 shares of Class A common stock beneficially held by Versant Venture Capital VI, L.P. (VVC VI), and (iv) 858,806 shares of Class A common stock beneficially held by Versant Vantage I, L.P. (VV I). Versant Ventures VI GP, L.P. (VV VI GP) is the general partner of VVC VI, and Versant Ventures VI GP-GP, LLC (VV VI GP-GP) is the general partner of VV VI GP. Each of Bradley J. Bolzon, Jerel C. Davis, Ph.D., Kirk G. Nielsen, Clare Ozawa, a member of our board of directors, Robin L. Praeger, and Thomas Woiwode, Ph.D., is a managing director of VV VI GP-GP, and each may be deemed to possess voting and dispositive control over the shares held by VVC VI and each may be deemed to have indirect beneficial ownership of the shares held by VVC VI but disclaims beneficial ownership of such securities, except to the extent of his or

her respective pecuniary interest therein, if any. Versant Vantage I GP, L.P. (VV I GP) is the general partner of VV I, and Versant Vantage I GP-GP, LLC (VV I GP-GP) is the general partner of VV I GP. Each of Bradley J. Bolzon, Jerel C. Davis, Clare Ozawa, a member of our board of directors, Robin L. Praeger and Thomas Woiwode, Ph.D. is a managing director of VV I GP-GP, and each may be deemed to share voting and dispositive power over the shares held by VV I. Clare Ozawa, a member of our board of directors, is a managing director of VV VI GP-GP and VV I GP-GP and may be deemed to have voting or dispositive power with respect to the above referenced shares held by VVC VI and VV I and disclaims beneficial ownership of such shares except to the extent of her pecuniary interest therein. Dr. Ozawa submitted a resignation letter, which became effective immediately prior to the effectiveness of the registration statement of which this prospectus forms a part. The address for VVC VI and VV I is One Sansome Street, Suite 1650, San Francisco, CA 94104.

(8) Represents (i) 6,515,920 shares of Class A common stock beneficially owned by all current executive officers and directors as a group, of which 1,416,236 shares of Class A common stock issuable to all current executive officers and directors as a group are subject to options that are exercisable within 60 days of December 31, 2023.

(9) Represents (i) 2,326,561 shares of Class A common stock beneficially held by Versant Venture Capital IV, L.P. (VVC IV), (ii) 2,116,642 shares of Class A common stock beneficially held by VVC VI, (iii) 858,806 shares of Class A common stock beneficially held by VV I, and (iv) 14,654 shares of Class A common stock beneficially held by Versant Side Fund IV, L.P. (VSF IV). Versant Ventures IV, LLC (VV IV) is the general partner of each of VVC IV and VSF IV. Each of Kirk Nielsen, Thomas Woiwode, Bradley J. Bolzon, Robin Praeger, William Link, Samuel Colella, Rebecca Robertson, Brian Atwood, Ross Jaffe and Charles Warden is a managing director of VV IV and, as a result, each may be deemed to share voting and dispositive power over the shares held by each of VVC IV and VSF IV. VV VI GP is the general partner of VVC VI and VV VI GP-GP is the general partner of VV VI GP. Each of Bradley J. Bolzon, Jerel C. Davis, Kirk G. Nielsen, Clare Ozawa, a member of our board of directors, Robin L. Praeger and Tom Woiwode, Ph.D., is a managing director of VV VI GP-GP, may be deemed to share voting and dispositive power over the shares held by VVC VI. VV I GP is the general partner of VV I, and VV I GP-GP is the general partner of VV I GP. Each of Bradley J. Bolzon, Jerel C. Davis, Dr. Ozawa, a member of our board of directors, Robin L. Praeger and Dr. Woiwode, is a managing director of VV I GP-GP, and each may be deemed to share voting and dispositive power over the shares held by VV I. Dr. Ozawa, a member of our board of directors is a managing director of VV VI GP-GP and VV I GP-GP and may be deemed to have voting or dispositive power with respect to the above referenced shares held by VVC VI and VV I and disclaims beneficial ownership of such shares except to the extent of her pecuniary interest therein. Dr. Ozawa submitted a resignation letter, which became effective immediately prior to the effectiveness of the registration statement of which this prospectus forms a part. Additionally, all indirect holders of the above referenced shares disclaim beneficial ownership of all applicable shares except to the extent of their respective pecuniary interest therein. The address for VVC IV, VVC VI, VV I, and VSF IV is One Sansome Street, Suite 1650, San Francisco, CA 94104.

(10) Represents (i) 128,066 shares of our Class B common stock held by 667, L.P. (667) and (ii) 1,605,272 shares of our Class B common stock held by Baker Brothers Life Sciences, L.P. (Life Sciences). BBA is the management company and investment adviser to Baker Brothers and has complete and unlimited discretion and authority with respect to their investments and voting power over investments. Baker Bros. Advisors (GP) LLC (BBA-GP) is the sole general partner of BBA. The managing members of BBA-GP are Julian C. Baker and Felix J. Baker. Each of BBA-GP, Felix J. Baker and Julian C. Baker, as a managing member of BBA-GP and BBA, may be deemed to be beneficial owners of the common shares directly held by the Baker Brothers. Each of Julian C. Baker, Felix J. Baker, BBA-GP and BBA disclaim beneficial ownership of these securities, except to the extent of his or its pecuniary interest therein. The address for BBA, BBA-GP, Felix J. Baker and Julian C. Baker is c/o Baker Bros. Advisors LP, 860 Washington Street, 3rd Floor, New York, NY 10014.

(11) Represents (i) 800,887 shares of Class A common stock held by New Emerging Medical Opportunities Fund IV SCSp and (ii) 149,999 shares of Class A common stock beneficially held by Sectoral DC 10 Limited. Dr. Larson, a member of our board of directors, is a partner of New Emerging Medical Opportunities Fund IV SCSp and Sectoral DC 10 Limited and may be deemed to be a beneficial owner of the common shares held by New Emerging Medical Opportunities Fund IV SCSp and Sectoral DC 10 Limited. Dr. Larson disclaims beneficial ownership of these securities, except to the extent of his pecuniary interest therein. The address for New Emerging Medical Opportunities Fund IV SCSp, Sectoral DC 10 Limited, and Dr. Larson is c/o Sectoral Asset Management Inc., 1010 Sherbrooke St. West, Suite 1610, Montreal, QC, H3A 2R7, Canada.

(12) Represents 1,666,673 shares of Class A common stock beneficially held by JJDC, a wholly owned subsidiary of J&J, a New Jersey corporation. J&J may be deemed to indirectly beneficially own the shares that are directly beneficially owned by JJDC. The principal business address of J&J is One Johnson & Johnson Plaza, New Brunswick, NJ 08933, and the principal business address of JJDC is 410 George Street, New Brunswick, NJ 08901.

DESCRIPTION OF CAPITAL STOCK

The following description summarizes the most important terms of our capital stock, our amended and restated certificate of incorporation and our amended and restated bylaws, as each will be in effect following this offering. Because it is only a summary, it does not contain all the information that may be important to you. For a complete description, you should refer to our amended and restated certificate of incorporation and amended and restated bylaws, which are included as exhibits to the registration statement of which this prospectus forms a part, and to the applicable provisions of Delaware law.

General

Upon the completion of this offering, our authorized capital stock will consist of 200,000,000 shares of Class A common stock, $0.001 par value per share, 20,000,000 shares of Class B common stock, $0.001 par value per share, and 10,000,000 shares of undesignated preferred stock, $0.001 par value per share. Our board of directors will be authorized, without stockholder approval, to issue additional shares of our capital stock.

Pursuant to the provisions of our current amended and restated certificate of incorporation, all of the outstanding convertible preferred stock will automatically convert into 15,906,236 shares of our common stock, consisting of 14,172,898 shares of our Class A common stock and 1,733,338 shares of Class B common stock in connection with the completion of this offering. Each of our Series A, Series A-1, Series B and Series C convertible preferred stock will convert at a ratio of 1:1. Assuming the effectiveness of this conversion as of December 31, 2023, there were 16,522,452 shares of our Class A common stock outstanding, held by approximately 137 stockholders of record, 1,733,338 shares of Class B common stock, and no shares of our convertible preferred stock outstanding.

Class A Common Stock and Class B Common Stock

If, immediately following the closing of this offering, and after taking into account any shares of Class A common stock purchased by a holder of our convertible preferred stock or its affiliates in this offering, a conversion of our convertible preferred stock held by such holder would result in such holder beneficially holding in excess of 4.99% of the then outstanding Class A common stock, then, subject to certain conditions, the holder may convert a portion of such holder's outstanding preferred stock into shares of Class B common stock in order for such's holder beneficial ownership to be equal to or less than 4.99% of the then outstanding Class A common stock.

Holders of our Class A common stock have no conversion rights, while holders of our Class B common stock have the right to convert each share of our Class B common stock into one share of Class A common stock at such holder's election, provided that as a result of such conversion, such holder, together with its affiliates and any members of a Schedule 13(d) group with such holder, would not beneficially own in excess of 4.99% of our Class A common stock immediately prior to and following such conversion, unless otherwise as expressly provided for in our amended and restated certificate of incorporation. However, this ownership limitation may be increased or decreased to any other percentage designated by such holder of Class B common stock upon 61 days' notice to us.

Dividend Rights

Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of our Class A common stock and our Class B common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and then only at the times and in the amounts that our board of directors may determine. See the section entitled "Dividend Policy."

Voting Rights

Except as otherwise expressly provided in our amended and restated certificate of incorporation or as required by applicable law, on any matter that is submitted to a vote by our stockholders, holders of our Class A common stock are entitled to one vote per share of Class A common stock, and holders of our Class B common stock are not entitled to vote, including for the election of directors. We have not provided for cumulative voting for the election of directors in our amended and restated certificate of incorporation, which means that holders of a majority of the shares of our Class A common stock will be able to elect all of our directors. Our amended and restated certificate of incorporation will establish a classified board of directors, to be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms.

No Preemptive or Similar Rights

Neither our Class A common stock nor our Class B common stock is entitled to preemptive rights, and neither is subject to conversion, redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

Upon our liquidation, dissolution or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our Class A common stock and our non-voting Class B common stock and any participating preferred stock outstanding at that time, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights of and the payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

Preferred Stock

Upon the completion of this offering, no shares of preferred stock will be outstanding, but we will be authorized, subject to limitations prescribed by Delaware law, to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series and to fix the designation, powers, preferences and rights of the shares of each series and any associated qualifications, limitations or restrictions. Our board of directors also can increase or decrease the number of shares of any series, but not below the number of shares of that series then outstanding, without any further vote or action by our stockholders. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company and may adversely affect the market price of our common stock and the voting and other rights of the holders of common stock. We have no current plan to issue any shares of preferred stock.

Warrants

As of December 31, 2023, we had outstanding an immediately exercisable warrant to purchase 15,764 shares of our Series B convertible preferred stock at an exercise price of $9.52 per share. The warrant is subject to a cashless exercise mechanism. In connection with this offering, the warrant will become exercisable for an aggregate of 15,764 shares of our Class A common stock at an exercise price of $9.52 per share.

Options

As of December 31, 2023, there were options to purchase 2,674,405 shares of our Class A common stock outstanding, with an average exercise price of $5.91, all of which were granted under our 2012 Plan.

Registration Rights

Following the completion of this offering, the holders of shares of our common stock issued upon the conversion of our preferred stock will be entitled to contractual rights to require us to register those shares under the Securities Act. These registration rights are provided under the terms of the Investors' Rights Agreement, which we entered in February 2021.

We will pay all expenses relating to any demand or piggyback registration described below, other than underwriting discounts. The registration rights terminate upon the earliest to occur of: (i) the third anniversary of the completion of this offering; (ii) a liquidation event; or (iii) with respect to the registration rights of an individual holder, such earlier time after this offering at which the holder can sell all of its shares in compliance with Rule 144 during any 90-day period without registration.

Demand Registration Rights

The holders 15,906,236 shares of our Class A common stock, which includes all of the shares of Class A common stock issuable upon the automatic conversion of our convertible preferred stock (including Class A common stock issuable upon conversion of our Class B common stock) (the registrable securities) of the registrable securities will be entitled to certain demand registration rights. At any time beginning 180 days following the effectiveness of this offering, the holders of 60% or more of such registrable securities then outstanding may make a written request that we register at least 85% of their registrable securities then outstanding (or a lesser percentage if the anticipated aggregate offering price, net of underwriting discounts and commissions, is not less than $10.0 million), subject to certain specified conditions and exceptions. We are required to use commercially reasonable efforts to effect the registration and will pay all registration expenses, other than underwriting discounts, related to any demand registration. We are not obligated to effect more than two of these registrations.

Piggyback Registration Rights

In connection with this offering, holders of our registrable securities were entitled to, and the necessary percentage of holders waived, their rights to notice of this offering and to include their registrable securities in this offering. If we propose to register any of our securities under the Securities Act either for our own account or for the account of other stockholders in another offering, the holders of shares having registration rights will, subject to certain exceptions, be entitled to include their shares in our registration statement, provided that the underwriters of any such offering have the right to limit the number of shares included in the registration. These registration rights are subject to specified other conditions and limitations as set forth in the Investors' Rights Agreement.

Form S-3 Registration Rights

At any time after we are qualified to file a registration statement on Form S-3, and subject to limitations and conditions specified in the Investors' Rights Agreement, any holder or holders of registrable securities then outstanding may make a written request that we prepare and file a registration statement on Form S-3 under the Securities Act covering their shares, so long as the aggregate price to the public is at least $2.0 million. We are not obligated to effect more than two of these Form S-3 registrations in any 12-month period. We will pay all registration expenses, other than underwriting discounts, related to any Form S-3 registration.

Baker Registration Rights Agreement

On July 9, 2021 we entered into the Baker Registration Rights Agreement, pursuant to which, Baker Brothers is, subject to certain limitations, entitled to certain registration rights. These registration rights include the right to demand that we file with the SEC a Form S-3 registration statement covering the registration of their common stock for resale, subject to certain conditions, as well as rights to be permitted one underwritten public offering per calendar year, but no more than two underwritten public offerings in any 12-month period or three underwritten public offering in total, to effect the sale of their common stock for sale. The Baker Registration Rights Agreement requires us to pay expenses relating to such registrations (excluding any underwriting discounts, selling commissions and the fees and expenses of any legal counsel or other advisors of such holder(s) in connection with such registration) and indemnify these holders against certain liabilities. Our registration obligations under the Baker Registration Rights Agreement continue in effect until the earliest of (i) up to ten years after the date we entered into the Baker Registration Rights Agreement, (ii) when the applicable registrable securities have been resold by the holders pursuant to an effective registration statement, or (iii) when the applicable registrable securities have been resold pursuant to Rule 144 (or other similar rule).

Anti-Takeover Provisions

Delaware Law

Upon the completion of this offering, we will be governed by the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. This section prevents some Delaware corporations from engaging, under some circumstances, in a business combination, which includes a merger or sale of at least 10 percent of the corporation's assets with any interested stockholder, meaning a stockholder who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15 percent or more of the corporation's outstanding voting stock, unless:

- the transaction is approved by the board of directors prior to the time that the interested stockholder became an interested stockholder;
- upon closing of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85 percent of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- subsequent to such time that the stockholder became an interested stockholder the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders by at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

While a Delaware corporation may "opt out" of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or amended and restated bylaws resulting from a stockholders' amendment approved by at least a majority of the outstanding voting shares, we have not opted out of these provisions. As a result, mergers or other takeover or change in control attempts of us may be discouraged or prevented.

Certificate of Incorporation and Bylaw Provisions

Upon the completion of this offering, our amended and restated certificate of incorporation and our amended and restated bylaws will include a number of provisions that may have the effect of

deterring hostile takeovers or delaying or preventing changes in control of our management team, including the following:

- ***Board of Directors Vacancies***. Our amended and restated certificate of incorporation and amended and restated bylaws will authorize our board of directors to fill vacant directorships, including newly-created seats. In addition, the number of directors constituting our board of directors will be set only by resolution adopted by a majority vote of our entire board of directors. These provisions will prevent a stockholder from increasing the size of our board of directors and gaining control of our board of directors by filling the resulting vacancies with its own nominees.
- ***Classified Board***. Our amended and restated certificate of incorporation and amended and restated bylaws will provide that our board of directors will be classified into three classes of directors, each of which will hold office for a three-year term. In addition, directors may only be removed from the board of directors for cause and only by the approval of $66^{2/3}$ percent of our then-outstanding shares of our common stock. A third party may be discouraged from making a tender offer or otherwise attempting to obtain control of us as it is more difficult and time consuming for stockholders to replace a majority of the directors on a classified board of directors.
- ***Stockholder Action; Special Meeting of Stockholders***. Our amended and restated certificate of incorporation will provide that stockholders will not be able to take action by written consent, and will only be able to take action at annual or special meetings of our stockholders. Stockholders will not be permitted to cumulate their votes for the election of directors. Our amended and restated bylaws will further provide that special meetings of our stockholders may be called only by a majority vote of our entire board of directors, the chairman of our board of directors or our chief executive officer.
- ***Advance Notice Requirements for Stockholder Proposals and Director Nominations***. Our amended and restated bylaws will provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders, or to nominate candidates for election as directors at any meeting of stockholders. Our amended and restated bylaws will also specify certain requirements regarding the form and content of a stockholder's notice. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our meetings of stockholders.
- ***Issuance of Undesignated Preferred Stock***. Our board of directors will have, the authority, without further action by the holders of common stock, to issue up to 10,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by the board of directors. The existence of authorized but unissued shares of preferred stock will enable our board of directors to render more difficult or discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise.

Choice of Forum

Upon the completion of this offering, our amended and restated certificate of incorporation will provide that the Court of Chancery of the State of Delaware will be the exclusive forum 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 amended and restated certificate of incorporation or our amended and restated bylaws or any action asserting a claim against us that is governed by the internal affairs doctrine. Our amended and restated certificate of incorporation will also provide that the U.S. federal district courts will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities

Act. Some companies that adopted a similar federal district court forum selection provision were subject to a suit in the Chancery Court of Delaware by stockholders who asserted that the provision is not enforceable. While the Delaware Supreme Court held that such federal district court forum selection provision was in fact valid, there can be no assurance that federal courts or other state courts will follow the holding of the Delaware Supreme Court or determine that the our federal district court forum selection provision should be enforced in a particular case.

These choice of forum provisions do not apply to actions brought to enforce a duty or liability created by the Exchange Act. We intend for the choice of forum provision regarding claims arising under the Securities Act to apply despite the fact that Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all actions brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. There is uncertainty as to whether a court would enforce such provision with respect to claims under the Securities Act, and our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

These exclusive forum provisions may limit the ability of our stockholders to bring a claim in a judicial forum that such stockholders find favorable for disputes with us or our directors, officers or employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find such provisions contained in our certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could materially adversely affect our business, financial condition and operating results.

Transfer Agent and Registrar

Our transfer agent and registrar for our common stock is Equiniti Trust Company, LLC. The transfer agent’s address is 48 Wall Street, Floor 23, New York, NY 10005, and its telephone number is (800) 937-5449.

Listing

Our Class A common stock has been approved for listing on the Nasdaq Global Select Market under the symbol “CTNM.”

SHARES ELIGIBLE FOR FUTURE SALE

Before this offering, there has not been a public market for shares of our Class A common stock and a liquid trading market for Class A common stock may not develop or be sustained after this offering. Future sales of substantial amounts of shares of our Class A common stock, including shares issued upon the exercise of outstanding options, in the public market following this offering or the possibility of these sales occurring, could cause the prevailing market price for our common stock to fall or impair our ability to raise equity capital through sales of equity securities in the future.

Upon the closing of this offering, we will have outstanding 23,397,452 shares of our Class A common stock and 1,733,338 shares of our Class B common stock, based on the number of shares outstanding as of December 31, 2023. This includes shares of Class A common stock that we are selling in this offering, which shares may be resold in the public market immediately unless purchased by our affiliates, and assumes no additional exercise of outstanding options other than as described elsewhere in this prospectus.

Of these shares, all shares sold in this offering, plus any shares sold by us upon exercise of the underwriters' option to purchase additional shares of Class A common stock, will be freely tradable without restriction under the Securities Act, unless purchase by our "affiliates," as that term is defined in Rule 144 under the Securities Act. The remaining shares of Class A common stock that are not sold in this offering or issuable upon conversion of the shares of Class B common stock will be "restricted securities," as that term is defined in Rule 144 under the Securities Act, and we expect that substantially all of these restricted securities will be subject to the 180-day lock-up period under the lock-up agreements as described below. 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 Rule 144 or Rule 701 under the Securities Act, which are summarized below.

In addition, we, our executive officers and directors, and substantially all of our security holders have entered into market standoff agreements with us or lock-up agreements with the underwriters under which they have agreed, subject to specific exceptions, not to sell any of our capital stock until at least 180 days after the date of this prospectus, as described below. As a result of these agreements and the provisions of our investors' rights agreement disclosed in "Description of Capital Stock—Registration Rights," subject to the provisions of Rule 144 or Rule 701, based on the offering date of April 4, 2024, 25,130,790 shares will be available for sale in the public market as follows:

- beginning on the date of this prospectus, the 6,875,000 shares of Class A common stock sold in this offering will be immediately available for sale in the public market, unless purchased by our affiliates; and
- beginning 181 days after the date of this prospectus, 16,522,452 additional shares of Class A common stock and 1,733,338 shares of Class A common stock issuable upon conversion of Class B common stock will become eligible for sale in the public market, of which 5,507,610 shares of Class A common stock will be held by our current officers, directors and greater than 10% stockholders, subject in some cases to the volume and other restrictions of Rule 144, as described below.

We cannot estimate the number of shares of our Class A common stock or shares issuable upon conversion of Class B common stock that our existing stockholders will elect to sell under Rule 144.

Rule 144

In general, under Rule 144 as currently in effect, a person who has beneficially owned shares of our restricted common stock for at least six months would be entitled to sell their securities provided

that such person is not deemed to have been one of our affiliates at the time of, or at any time during the 90 days preceding, a sale, and we are subject to the periodic reporting requirements of the Exchange Act, for at least 90 days before the sale. In addition, under Rule 144, any person who is not an affiliate of ours and has held their shares for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares immediately upon the completion of this offering without regard to whether current public information about us is available. Persons who have beneficially owned shares of our restricted common stock for at least six months but who are our affiliates at the time of, or any time during the 90 days preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of our capital stock then outstanding, which will equal 233,974 shares immediately after the completion of this offering, assuming no exercise by the underwriters of their option to purchase additional shares; or
- the average weekly trading volume of our Class A common stock on Nasdaq during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale,

provided, in each case, that we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale. Such sales both by affiliates and by non-affiliates must also comply with the manner of sale, current public information and notice provisions of Rule 144.

Rule 701

Any of our employees, directors, officers, consultants, advisors or service providers, other than a person who is deemed to have been one of our affiliates during the immediately preceding 90 days of the date of this prospectus, who purchased shares under a written compensatory plan or contract prior to this offering may be entitled to rely on the resale provisions of Rule 701. Rule 701, as currently in effect, permits resales of shares, in reliance upon Rule 144 but without compliance with certain restrictions, including the holding period requirement, of Rule 144. Rule 701 further provides that non-affiliates may sell such shares in reliance on Rule 144 without having to comply with the public information, volume limitation or notice provisions of Rule 144. All holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling such shares if such resale is pursuant to Rule 701. All Rule 701 shares are, however, subject to lock-up agreements and will only become eligible for sale upon the expiration of these lock-up agreements.

Lock-Up Agreements

In connection with this offering, we and each of our directors and officers and the holders of substantially all of our security holders have agreed with the underwriters, subject to certain exceptions, not to offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, shares of our Class A common stock or any securities convertible into or exchangeable for shares of our Class A common stock or Class B common stock or enter into any swap or other arrangement that transfers to another any of the economic consequences of ownership of our Class A common stock or Class B common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of the underwriters. These agreements are subject to certain exceptions.

Certain of our employees, including our executive officers, and directors may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these

trading plans would not be permitted until the expiration of the lock-up agreements relating to our initial public offering described above.

Registration Rights

As of March 2024, certain holders of 15,906,236 shares of our Class A common stock, which includes all of the shares of Class A common stock issuable upon the automatic conversion of our convertible preferred stock (including Class A common stock issuable upon conversion of our Class B common stock) immediately upon the closing of this offering, or their transferees will be entitled to various rights with respect to the registration of these shares under the Securities Act upon the completion of this offering. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration, except for shares purchased by affiliates. Please see the section titled “Description of Capital Stock—Registration Rights” for a description of these registration rights.

Equity Plans

As of December 31, 2023, we had outstanding options to purchase an aggregate of 2,674,405 shares of our Class A common stock under the 2012 Plan. Following this offering, we intend to file a registration statement on Form S-8 under the Securities Act to register all of the shares of our Class A common stock subject to options outstanding or reserved for issuance under the 2012 Plan, the 2024 Plan and the 2024 ESPP. We expect to file this registration statement as soon as practicable after the completion of this offering. This registration statement will become effective immediately upon filing, and shares covered by this registration statement will thereupon be eligible for sale in the public markets, subject to vesting restrictions, the lock-up agreements described above and Rule 144 limitations applicable to affiliates. For a more complete discussion of our stock plans, see “Executive Compensation—Equity Plans.”

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES FOR NON-U.S. HOLDERS OF OUR CLASS A COMMON STOCK

The following is a general discussion of the material U.S. federal income tax considerations applicable to non-U.S. holders (as defined below) with respect to their ownership and disposition of shares of our Class A common stock issued pursuant to this offering. For purposes of this discussion, a "non-U.S. holder" means a beneficial owner of our Class A common stock (other than an entity or arrangement that is treated as a partnership for U.S. federal income tax purposes) that is not, for U.S. federal income tax purposes, any of the following:

- an individual citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in the United States or under the laws of the United States, any state thereof or the District of Columbia;
- an estate, the income of which is includable in gross income for U.S. federal income tax purposes regardless of its source; or
- a trust if (i) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more "U.S. persons," as defined under the Code, have the authority to control all substantial decisions of the trust or (ii) such trust has made a valid election to be treated as a U.S. person for U.S. federal income tax purposes.

This discussion is based on current provisions of the Code, existing, temporary and proposed Treasury Regulations promulgated thereunder, judicial opinions, published positions of the Internal Revenue Service (IRS) and other applicable authorities, all of which are subject to change or to differing interpretation, possibly with retroactive effect. This discussion assumes that a non-U.S. holder holds shares of our Class A common stock as a capital asset (generally, property held for investment) for U.S. federal income tax purposes.

This discussion does not address all aspects of U.S. federal income taxation that may be important to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances, nor does it address any aspects of the unearned income Medicare contribution tax pursuant to the Health Care and Education Reconciliation Act of 2010, U.S. gift and estate tax laws, except to the limited extent provided below, any U.S. alternative minimum taxes or any state, local or non-U.S. taxes. This discussion may not apply, in whole or in part, to particular non-U.S. holders in light of their individual circumstances or to holders subject to special treatment under the U.S. federal income tax laws such as:

- insurance companies, banks, and other financial institutions;
- tax-exempt organizations (including private foundations) and tax-qualified retirement plans;
- "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds;
- persons subject to special tax accounting rules as a result of any item of gross income with respect to our Class A common stock being taken into account in an applicable financial statement;
- non-U.S. governments and international organizations;
- broker-dealers and traders in securities;
- U.S. expatriates and certain former citizens or long-term residents of the United States;
- "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;

- persons that hold our Class A common stock as part of a “straddle,” “hedge,” “conversion transaction,” “synthetic security,” or integrated investment or other risk reduction strategy; and
- partnerships and other pass-through entities, and investors in such pass-through entities (regardless of their places of organization or formation).

Such non-U.S. holders are urged to consult their own tax advisors to determine the U.S. federal, state, local, and other tax consequences that may be relevant to them.

If a partnership (or other entity or arrangement treated as a partnership for U.S. federal income tax purposes) holds our Class A common stock, the tax treatment of a partner therein will generally depend on the status of the partner and the activities of the partnership. Partners of a partnership holding our Class A common stock should consult their own tax advisors as to the particular U.S. federal income tax consequences applicable to them.

INVESTORS CONSIDERING THE PURCHASE OF OUR CLASS A COMMON STOCK SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE APPLICATION OF THE U.S. FEDERAL INCOME AND ESTATE TAX LAWS TO THEIR PARTICULAR SITUATIONS AND THE CONSEQUENCES OF NON-U.S., STATE, OR LOCAL LAWS AND TAX TREATIES.

Distributions on our Class A Common Stock

We do not expect to declare or make any distributions on our Class A common stock in the foreseeable future. If we do pay dividends on shares of our Class A common stock, however, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital that is applied against and reduces, but not below zero, a non-U.S. holder’s adjusted tax basis in shares of our Class A common stock. Any excess will be treated as capital gain and will be subject to the treatment described below under “—Gain on Sale or Other Disposition of Class A Common Stock.” Any distributions will also be subject to the discussion below under “—Backup Withholding and Information Reporting” and “—Foreign Account Tax Compliance Act.”

Any distribution that is treated as a dividend paid to a non-U.S. holder on our Class A common stock that is not effectively connected with a non-U.S. holder’s conduct of a trade or business in the United States will generally be subject to U.S. withholding tax at a 30% rate. The withholding tax might apply at a reduced rate, however, under the terms of an applicable income tax treaty between the United States and the non-U.S. holder’s country of residence. You should consult your own tax advisors regarding your entitlement to benefits under a relevant income tax treaty. Generally, in order for us or our paying agent to withhold tax at a lower treaty rate, a non-U.S. holder must certify its entitlement to treaty benefits. A non-U.S. holder generally can meet this certification requirement by providing an IRS Form W-8BEN, W-8BEN-E or other appropriate form (or any successor or substitute form thereof) to us or our paying agent. If the non-U.S. holder holds the stock through a financial institution or other agent acting on the holder’s behalf, the holder will be required to provide appropriate documentation to the holder’s agent. The holder’s agent will then be required to provide certification to us or our paying agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty, you may obtain a refund or credit of any excess amounts withheld by filing an appropriate claim for a refund with the IRS in a timely manner.

Dividends received by a non-U.S. holder that are effectively connected with a U.S. trade or business conducted by the non-U.S. holder, and if required by an applicable income tax treaty between the United States and the non-U.S. holder’s country of residence, are attributable to a permanent

establishment maintained by the non-U.S. holder in the United States, are not subject to U.S. withholding tax. To obtain this exemption, a non-U.S. holder must provide us or our paying agent with an IRS Form W-8ECI properly certifying such exemption. Such effectively connected dividends, although not subject to withholding tax, are taxed at the same graduated rates applicable to U.S. persons, net of certain deductions and credits. In addition to being taxed at graduated tax rates, dividends received by a corporate non-U.S. holder that are effectively connected with a U.S. trade or business of the corporate non-U.S. holder may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable tax treaty.

Gain on Sale or Other Disposition of Class A Common Stock

Subject to the discussion below under "—Backup Withholding and Information Reporting" and "—Foreign Account Tax Compliance Act," non-U.S. holders will generally not be subject to U.S. federal income tax on any gains realized on the sale, exchange or other disposition of our Class A common stock unless:

- the gain (i) is effectively connected with the conduct by the non-U.S. holder of a U.S. trade or business and (ii) if required by an applicable income tax treaty between the United States and the non-U.S. holder's country of residence, is attributable to a permanent establishment maintained by the non-U.S. holder in the United States (in which case the special rules described below apply);
- the non-U.S. holder is an individual who is present in the United States for 183 days or more in the taxable year of the sale, exchange or other disposition of our Class A common stock, and certain other requirements are met (in which case the gain would be subject to a flat 30% tax, or such reduced rate as may be specified by an applicable income tax treaty, which may be offset by U.S. source capital losses, even though the individual is not considered a resident of the United States); or
- the rules of the Foreign Investment in Real Property Tax Act (FIRPTA) treat the gain as effectively connected with a U.S. trade or business.

The FIRPTA rules may apply to a sale, exchange or other disposition of our Class A common stock if we are, or were within the shorter of the five-year period preceding the disposition and the non-U.S. holder's holding period, a "U.S. real property holding corporation," (USRPHC) under the Code. In general, we would be a USRPHC if interests in U.S. real estate comprised at least half of the value of our business assets. We do not believe that we are a USRPHC and we do not anticipate becoming one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a non-U.S. holder will not be subject to U.S. federal income tax if our Class A common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such non-U.S. holder owned, actually and constructively, five percent or less of our Class A common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the non-U.S. holder's holding period.

If any gain from the sale, exchange or other disposition of our Class A common stock, (i) is effectively connected with a U.S. trade or business conducted by a non-U.S. holder and (ii) if required by an applicable income tax treaty between the United States and the non-U.S. holder's country of residence, is attributable to a permanent establishment maintained by such non-U.S. holder in the United States, then the gain generally will be subject to U.S. federal income tax at the same graduated rates applicable to U.S. persons, net of certain deductions and credits. If the non-U.S. holder is a corporation, under certain circumstances, that portion of its earnings and profits that is effectively connected with its U.S. trade or business, subject to certain adjustments, generally would be subject also to a "branch profits tax" at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty.

Backup Withholding and Information Reporting

We must report annually to the IRS and to each non-U.S. holder the amount of dividends paid to, and the tax withheld with respect to, each non-U.S. holder. These reporting requirements apply regardless of whether withholding was reduced or eliminated by an applicable tax treaty. Copies of this information reporting may also be made available under the provisions of a specific tax treaty or agreement with the tax authorities in the country in which the non-U.S. holder resides or is established.

A non-U.S. holder will generally be subject to backup withholding for dividends on our Class A common stock paid to such holder unless such holder certifies under penalties of perjury that, among other things, it is a non-U.S. holder (and the payer does not have actual knowledge or reason to know that such holder is a U.S. person) or otherwise establishes an exemption. Generally, a non-U.S. holder will comply with such procedures if it provides a properly executed IRS Form W-8BEN or W-8BEN-E or otherwise establishes an exemption.

Information reporting and backup withholding generally are not required with respect to the amount of any proceeds from the sale or other disposition of our Class A common stock by a non-U.S. holder outside the United States through a foreign office of a foreign broker that does not have certain specified connections to the United States. However, if a non-U.S. holder sells or otherwise disposes of its shares of Class A common stock through a U.S. broker or the U.S. offices of a foreign broker, the broker will generally be required to report the amount of proceeds paid to the non-U.S. holder to the IRS and impose backup withholding on that amount unless such non-U.S. holder provides appropriate certification to the broker of its status as a non-U.S. holder (and the payer does not have actual knowledge or reason to know that such holder is a U.S. person) or otherwise establishes an exemption.

Backup withholding is not an additional income tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder generally can be credited against the non-U.S. holder's U.S. federal income tax liability, if any, or refunded, provided that the required information is furnished to the IRS in a timely manner. Non-U.S. holders should consult their tax advisors regarding the application of the information reporting and backup withholding rules to them.

Foreign Account Tax Compliance Act

Under the Foreign Account Tax Compliance Act (FATCA), withholding tax of 30% applies to certain payments to foreign financial institutions, investment funds and certain other non-U.S. persons that fail to comply with certain information reporting and certification requirements pertaining to their direct and indirect U.S. securityholders and/or U.S. accountholders and do not otherwise qualify for an exemption. Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our common stock. While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of our common stock on or after January 1, 2019, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued.

Prospective investors are encouraged to consult with their own tax advisors regarding the possible implications of FATCA on their investment in our Class A common stock.

Federal Estate Tax

The estates of nonresident alien individuals generally are subject to U.S. federal estate tax on property with a U.S. situs. Because we are a U.S. corporation, Class A common stock we have issued

that is owned (or treated as owned) by an individual who is not a citizen or a resident of the United States (as defined for U.S. federal estate tax purposes) at the time of death will be included in the individual's gross estate for U.S. federal estate tax purposes unless an applicable estate or other tax treaty provides otherwise, and therefore may be subject to U.S. federal estate tax. Investors are urged to consult their own tax advisors regarding the U.S. federal estate tax consequences of the ownership or disposition of our Class A common stock.

PROSPECTIVE INVESTORS SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE POTENTIAL APPLICATION OF WITHHOLDING UNDER FATCA TO THEIR INVESTMENT IN OUR CLASS A COMMON STOCK. THE PRECEDING DISCUSSION OF U.S. FEDERAL TAX CONSIDERATIONS IS FOR GENERAL INFORMATION PURPOSES ONLY. IT IS NOT TAX ADVICE. EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE PARTICULAR U.S. FEDERAL, GIFT, ESTATE, STATE, LOCAL, AND NON-U.S. TAX CONSEQUENCES OF PURCHASING, HOLDING, AND DISPOSING OF OUR CLASS A COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAWS.

UNDERWRITING

We and the underwriters named below have entered into an underwriting agreement with respect to the shares being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares indicated in the following table. Goldman Sachs & Co. LLC and Morgan Stanley & Co. LLC are the representatives of the underwriters.

Underwriters	Number of Shares
Goldman Sachs & Co. LLC	2,406,250
Morgan Stanley & Co. LLC	2,406,250
Stifel, Nicolaus & Company, Incorporated	1,203,125
RBC Capital Markets, LLC	859,375
Total	6,875,000

The underwriters are committed to take and pay for all of the shares being offered, if any are taken, other than the shares covered by the option described below unless and until this option is exercised.

The underwriters have an option to buy up to an additional 1,031,250 shares of our Class A common stock from us to cover sales by the underwriters of a greater number of shares than the total number set forth in the table above. They may exercise that option for 30 days. If any shares are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters by us. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional 1,031,250 shares of Class A common stock.

	Paid by the Company	
	No Exercise	Full Exercise
Per Share	$ 1.12	$ 1.12
Total	$ 7,700,000	$8,855,000

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $0.672 per share from the initial public offering price. After the initial offering of the shares, the representatives may change the offering price and the other selling terms. The offering of the shares by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part. In addition, we have requested that the underwriters make issuer directed allocations in the aggregate of 5,437,500 shares of our Class A common stock to certain investors.

We and our officers, directors and holders of substantially all of our capital stock and securities convertible into or exchangeable for our Class A common stock have agreed with the underwriters, subject to certain exceptions, during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus (the restricted period), except with the prior written consent of Goldman Sachs & Co. LLC and Morgan Stanley & Co. LLC not to (i) offer, sell, contract to sell, pledge, grant any option, right or warrant, directly or indirectly, to purchase, purchase any option or contract to sell, lend or otherwise transfer or dispose of any shares of common stock, or any options or warrants to purchase any shares of common stock, or any securities convertible into, exchangeable for or that represent the right to receive shares of common stock (the Lock-Up Securities), (ii) engage in any hedging or other transaction or arrangement (including, without limitation, any short sale or the

purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) which is designed to or which reasonably could be expected to lead to or result in a sale, loan, pledge or other disposition (whether by the securityholder or someone other than the securityholder), or transfer of any of the economic consequences of ownership, in whole or in part, directly or indirectly, of any Lock-Up Securities, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of common stock or other securities, in cash or otherwise, (iii) in the case of holders of our Class A common stock, make any demand for or exercise any right with respect to the registration of any Lock-Up Securities, or otherwise publicly announce any intention to engage in or cause any action, activity, transaction or arrangement described in clause (i), (ii) or (iii) above. See the section of this prospectus titled “Shares Eligible for Future Sale” for a discussion of certain transfer restrictions.

The restrictions described above do not apply to us for certain transactions, including (i) the sale of shares by us in this offering; (ii) any shares of Class A common stock issued by us upon the exercise of an option or warrant or the conversion of a security outstanding on the date of this prospectus and referred to in this prospectus, (iii) the reacquisition or withholding of all or a portion of shares of Class A Common Stock subject to a stock award to satisfy a tax withholding obligation of the Company in connection with the vesting, settlement or exercise of such stock award or to satisfy the purchase price or exercise price of such stock award, (iv) the grant of compensatory equity-based awards, and/or the issuance of shares of Class A Common Stock with respect thereto, made pursuant to compensatory equity-based plans referred to in this prospectus, (v) any shares of Class A common stock issued pursuant to any non-employee director compensation plan or program or dividend reinvestment plan referred to in this prospectus, (v) the filing of a registration statement on Form S-8 or any successor form thereto with respect to the registration of securities to be offered under any of our employee benefit or equity incentive plans referred to in this prospectus; or (vi) the issuance of shares of Class A Common Stock, restricted stock awards or securities convertible into or exercisable or exchangeable for shares of Class A Common Stock in connection with (i) the acquisition of the securities, business, property or other assets of another person or pursuant to any employee benefit plan assumed in connection with any such acquisition, (ii) joint ventures, (iii) commercial relationships or (iv) other strategic transactions, provided that the aggregate number of shares of Class A Common Stock, restricted stock awards and shares of Class A Common Stock issuable upon the conversion, exercise or exchange of securities (on an as converted or as exercised basis, as the case may be) shall not exceed 5% of the total number of shares of Class A Common Stock issued and outstanding immediately following this offering, and provided, further, that each recipient of shares of Class A Common Stock, restricted stock awards or securities convertible into or exercisable or exchangeable for shares of Class A Common Stock shall agree to abide by the terms of the lock-up or enter into a lock-up agreement with the underwriters.

The restrictions described above do not apply, subject in certain cases to various conditions, to our officers, directors and holders of substantially all of our capital stock and securities convertible into or exchangeable for our Class A common stock with respect to certain transactions, including:

(a) transferring Lock-Up Securities (i) as one or more *bona fide* gifts or charitable contributions, or for *bona fide* estate planning purposes; (ii) upon death by will, testamentary document or intestate succession; (iii) if the securityholder is a natural person, to any member of the securityholder’s immediate family (for purposes of the lock-up agreement, “immediate family” shall mean any relationship by blood, current or former marriage, domestic partnership or adoption, not more remote than first cousin) or to any trust for the direct or indirect benefit of the securityholder or the immediate family of the securityholder or, if the securityholder is a trust, to a trustor, trustee, or beneficiary of the trust or the estate of a beneficiary of such trust; (iv) to a partnership, limited liability company, corporation or other entity of which the securityholder and the immediate family of the securityholder are the

legal and beneficial owner of all of the outstanding equity securities or similar interests; (v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (iv) above; (vi) if the securityholder is a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate (as defined in Rule 405 promulgated under the Securities Act) of the securityholder, (B) to any investment fund or other entity which fund or entity is directly or indirectly controlling, controlled by, managing or managed by or under common control with the securityholder or affiliates of the securityholder, or (C) as part of a distribution, transfer, or disposition by the securityholder to its stockholders, partners, members or other equityholders, as the case may be, or to the estate of any such stockholders, partners, members or other equityholders of the securityholder; (vii) by operation of law, such as pursuant to a qualified domestic order, divorce settlement, divorce decree or separation agreement; (viii) to us if such holder is a current or former employee or service provider of the Company upon death, disability or termination of employment, in each case, of such employee or service provider; (ix) in connection with the sale, transfer, or disposal of, or entry into other transactions (including, without limitation, any swap, hedge, or similar agreement or arrangement) relating to, the Lock-Up Securities acquired (A) from the Underwriters in the Public Offering or (B) in open market transactions on or after the closing date of the Public Offering; or (x) to us in connection with the vesting, settlement or exercise of restricted stock units, shares of restricted stock, options, warrants or other rights to purchase shares of Common Stock (including, in each case, by way of "net" or "cashless" exercise), including any transfer to us for the payment of exercise price, tax withholdings or remittance payments due as a result of the vesting, settlement or exercise of such restricted stock units, options, warrants or other rights, or in connection with the conversion of convertible securities, in all such cases pursuant to an agreement or equity awards granted under a stock incentive plan or other equity award plan, or pursuant to the terms of convertible securities, each as described in or filed as an exhibit to the registration statement of which this prospectus forms a part, the preliminary prospectus relating to the shares of Class A common stock included in the registration statement of which this prospectus forms a part immediately prior to the time the underwriting agreement is executed and this prospectus, provided that any securities received upon such vesting, settlement, exercise or conversion shall be subject to the terms of the lock-up agreement, provided that (A) in the case of clauses (a)(i), (ii), (iii), (iv), (v) and (vi) above, such transfer or distribution shall not involve a disposition for value, (B) in the case of clauses (a)(i), (ii), (iii), (iv), (v), (vi) and (vii) above, it shall be a condition to the transfer or distribution that the donee, devisee, transferee or distributee, as the case may be, shall sign and deliver a lock up agreement, (C) in the case of clauses (i), (ii), (iii), (iv), (v) and (vi) above, no filing by any party (including, without limitation, any donor, donee, devisee, transferor, transferee, distributor or distributee) under the Exchange Act, or other public filing, report or announcement reporting a reduction in beneficial ownership of the securityholder's holdings shall be required or shall be voluntarily made in connection with such transfer or distribution, and (D) in the case of clauses (vii), (viii), (ix) and (x) above, no filing under the Exchange Act or other public filing, report or announcement shall be voluntarily made, and if any such filing, report or announcement shall be legally required during the restricted period, such filing, report or announcement shall clearly indicate in the footnotes thereto (A) the circumstances of such transfer or distribution and (B) in the case of a transfer or distribution pursuant to clause (vii) above, that the donee, devisee, transferee or distributee has agreed to be bound by a lock-up agreement;

(b) exercising outstanding options, settling restricted stock units or other equity awards pursuant to plans described in the prospectus or exercising warrants described in this

prospectus, provided that any Lock-Up Securities received upon such exercise, vesting or settlement shall be subject to the terms of the lock-up agreement;

(c) entering into a written plan meeting the requirements of Rule 10b5-1 under the Exchange Act relating to the transfer, sale, or other disposition of the securityholder's Lock-Up Securities provided that none of the securities subject to such plan may be transferred, sold, or otherwise disposed of until after the expiration of the restricted period (except to the extent otherwise disposed pursuant to the lock-up agreement) and if during the restricted period any public announcement, report, or filing under the Exchange Act, or any other public filing, report, or announcement, shall be voluntarily made or legally required to be made regarding the establishment of such plan, then such filing, report, or announcement shall clearly indicate therein that that none of the securities subject to such plan may be transferred, sold, or otherwise disposed of pursuant to such plan until after the expiration of the restricted period;

(d) transferring Lock-Up Securities pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction that is approved by our board of directors (or a duly authorized committee thereof) and made to all holders of our capital stock involving a Change of Control of the Company (for purposes hereof, "Change of Control" shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons, of shares of capital stock if, after such transfer, such person or group of affiliated persons would hold at least a majority of the outstanding voting securities of the Company (or the surviving entity)); provided that in the event that such tender offer, merger, consolidation or other similar transaction is not completed, the securityholder's Lock-Up Securities shall remain subject to the provisions of the lock-up agreement;

(e) creating any charge, mortgage, lien, pledge, restriction, security interest or other encumbrance in respect of any Lock-Up Securities in connection with the securityholder's (or any of its affiliates') bona fide margin loans entered into by the securityholder or its affiliates in the ordinary course of business, and the transfers of any Lock-Up Securities in the event of any foreclosures or enforcements by the beneficiary of such transaction following default by the undersigned or any of its affiliates of such margin loans; provided, that any such securities received upon such transfers shall be subject to the restrictions on transfer set forth in the lock-up agreement and that no filing under the Exchange Act or other public announcement shall be required or made voluntarily in connection with such pledge or subsequent foreclosure, enforcement, or transfer of such securities (other than a filing on Form 3, Form 4, Form 5 (if applicable), Form 13F, Schedule 13D (or 13D/A) or Schedule 13G (or 13G/A) that is required to be filed during the Restricted Period, in which case such required filing shall clearly indicate in the footnotes thereto the applicable circumstances that cause the applicable exception to the lock-up agreement to apply); and

(f) entering into transfers or dispositions not involving a change in beneficial ownership, including (i) transactions involving a basket default swap or other derivative security tied to an underlying index or broad basket of publicly-traded equities, corporate bonds or other assets subject to credit risk and (ii) transactions concerning an index or broad basket of securities.

Prior to the offering, there has been no public market for the shares of our Class A common stock. The initial public offering price was negotiated among the company and the representatives. Among the factors considered in determining the initial public offering price of the shares, in addition to prevailing market conditions, were the company's historical performance, estimates of the business potential and earnings prospects of the company, an assessment of our management and the consideration of the above factors in relation to market valuation of companies in related businesses.

Our common stock has been approved for listing on the Nasdaq Global Select Market under the symbol “CTNM.”

In connection with the offering, the underwriters may purchase and sell shares of our Class A common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering, and a short position represents the amount of such sales that have not been covered by subsequent purchases. A “covered short position” is a short position that is not greater than the amount of additional shares for which the underwriters’ option described above may be exercised. The underwriters may cover any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to cover the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option described above. “Naked” short sales are any short sales that create a short position greater than the amount of additional shares for which the option described above may be exercised. The underwriters must cover any such naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the Class A common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of Class A common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of our Class A common stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of our Class A common stock. As a result, the price of our Class A common stock may be higher than the price that otherwise might exist in the open market. The underwriters are not required to engage in these activities and may end any of these activities at any time. These transactions may be effected on Nasdaq, in the over-the-counter market or otherwise.

We estimate that our share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately $2.5 million. We have agreed to reimburse the underwriters for certain of their expenses in an amount up to $35,000.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to us and to persons and entities with relationships with us, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of ours (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with us. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

European Economic Area

This prospectus is not a prospectus for the purposes of Regulation (EU) 2017/1129, as amended (Prospectus Regulation). This prospectus and any offer if made subsequently is directed only at persons in Member States of the EEA, each referred to as a Relevant State, who are "qualified investors" within the meaning of Article 2(e) of the Prospectus Regulation. This prospectus been prepared on the basis that any offer of shares in any Relevant State of the EEA will be made pursuant to an exemption under the Prospectus Regulation from the requirement to publish a prospectus for offers of shares. Accordingly any person making or intending to make an offer in a Relevant State of the EEA of shares which are the subject of the offering contemplated in this prospectus may only do so in circumstances in which no obligation arises for us or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Regulation in relation to such offer. Neither we nor the underwriters have authorized, nor do we or they authorize, the making of any offer of shares in the EEA in circumstances in which an obligation arises for us or the underwriters to publish a prospectus for such offer.

In relation to each Relevant State, no shares have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that the shares may be offered to the public in that Relevant State at any time:

(a) to any legal entity which is a qualified investor as defined under Article 2 of the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of the shares shall require us or any of the representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer to the public" in relation to the shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares.

United Kingdom

In the United Kingdom, this prospectus is not a prospectus for the purposes of Regulation (EU) 2017/1129 as it forms part of domestic law in the United Kingdom by virtue of the European Union (Withdrawal) Act 2018, as amended (EUWA), referred to as the UK Prospectus Regulation. This prospectus has been prepared on the basis that any offer if made subsequently is directed only at persons in the United Kingdom who are "qualified investors" within the meaning of Article 2(e) of the UK Prospectus Regulation. This prospectus has been prepared on the basis that any offer of shares in the United Kingdom will be made pursuant to an exemption under the UK Prospectus Regulation from the requirement to publish a prospectus for offers of shares. Accordingly any person making or intending to make an offer in the United Kingdom of shares which are the subject of the offering contemplated in this offering may only do so in circumstances in which no obligation arises for us or any of the underwriters to publish a prospectus pursuant to Section 85 of the United Kingdom's Financial Services and Markets Act 2000, as amended (FSMA) in relation to such offer. Neither we nor the underwriters have authorized, nor do we or they authorize, the making of any offer of ordinary shares in circumstances in which an obligation arises for us or the underwriters to publish a prospectus for such offer.

Any invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) in connection with the issue or sale of the ordinary shares may only be communicated or caused to be communicated in circumstances in which Section 21(1) of the FSMA does not apply to us.

All applicable provisions of the FSMA must be complied with in respect to anything done by any person in relation to the ordinary shares in, from or otherwise involving the United Kingdom.

No shares have been offered or will be offered pursuant to the offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the shares which has been approved by the Financial Conduct Authority, except that the shares may be offered to the public in the United Kingdom at any time:

(a) to any legal entity which is a qualified investor as defined under Article 2 of the UK Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the UK Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or

(c) in any other circumstances falling within Section 86 of the FSMA.

provided that no such offer of the shares shall require us or the underwriters to publish a prospectus pursuant to Section 85 of the FSMA. For the purposes of this provision, the expression an "offer to the public" in relation to the shares in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares.

This prospectus may not be distributed or circulated to any person in the United Kingdom other than to (i) persons who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, referred to in this section as the Order. and (ii) high net worth entities falling within Article 49(2)(a) to (d) of the Order, referred to as relevant persons. This prospectus is directed only at relevant persons. Other persons should not act on this prospectus or any of its contents. This prospectus is confidential and is being supplied to you solely for your information and may not be reproduced, redistributed or passed on to any other person or published, in whole or in part, for any other purpose.

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 form, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Hong Kong

The shares have not been and will not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) (the C(WUMP)O) or (ii) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong (the SFO)) and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the C(WUMP)O) no advertisement, invitation or document relating to the shares has been or will be issued or has been or will be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the SFO and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the SFA)) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for 6 months after that corporation has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore (Regulation 32).

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for 6 months after that trust has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than $200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Solely for the purposes of its obligations pursuant to Section 309B of the SFA, we have determined, and hereby notify all relevant persons (as defined in the CMP Regulations 2018), that the shares are "prescribed capital markets products" (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended) (FIEA). The securities may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission (ASIC), in relation to the offering. This offering document does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the Corporations Act), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the Exempt Investors) who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This offering document contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this offering document is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Dubai International Financial Centre

This offering document relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority (DFSA). This offering document is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth in this prospectus and has no responsibility for the offering document. The securities to which this offering document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this offering document you should consult an authorized financial advisor.

Switzerland

We have not and will not register with the Swiss Financial Market Supervisory Authority (FINMA) as a foreign collective investment scheme pursuant to Article 119 of the Federal Act on Collective Investment Scheme of 23 June 2006, as amended (CISA), and accordingly the securities being offered pursuant to this prospectus have not and will not be approved, and may not be licenseable, with FINMA. Therefore, the securities have not been authorized for distribution by FINMA as a foreign collective investment scheme pursuant to Article 119 CISA and the securities offered hereby may not be offered to the public (as this term is defined in Article 3 CISA) in or from Switzerland. The securities may solely be offered to “qualified investors,” as this term is defined in Article 10 CISA, and in the circumstances set out in Article 3 of the Ordinance on Collective Investment Scheme of 22 November 2006, as amended (CISO), such that there is no public offer. Investors, however, do not benefit from protection under CISA or CISO or supervision by FINMA. This prospectus and any other materials relating to the securities are strictly personal and confidential to each offeree and do not constitute an offer to any other person. This prospectus may only be used by those qualified investors to whom it has been handed out in connection with the offer described in this prospectus and may neither directly or indirectly be distributed or made available to any person or entity other than its recipients. It may not be used in connection with any other offer and shall in particular not be copied and/or distributed to the public in Switzerland or from Switzerland. This prospectus does not constitute an issue prospectus as

that term is understood pursuant to Article 652a and/or 1156 of the Swiss Federal Code of Obligations. We have not applied for a listing of the securities on the SIX Swiss Exchange or any other regulated securities market in Switzerland, and consequently, the information presented in this prospectus does not necessarily comply with the information standards set out in the listing rules of the SIX Swiss Exchange and corresponding prospectus schemes annexed to the listing rules of the SIX Swiss Exchange.

LEGAL MATTERS

The validity of the issuance of our Class A common stock offered in this prospectus will be passed upon for us by Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, San Diego, California. Sidley Austin LLP, San Francisco, California, is representing the underwriters in this offering.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements at December 31, 2022 and 2023 and for the years then ended, as set forth in their report. We've included our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of Class A common stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits, schedules and amendments to the registration statement. Please refer to the registration statement and to the exhibits and schedules for further information with respect to the Class A common stock offered by this prospectus. Statements contained in this prospectus regarding the contents of any contract, agreement or other document are only summaries. With respect to any contract, agreement or document that is filed as an exhibit to the registration statement, you should refer to the exhibit for a copy of the contract, agreement or document, and each statement in this prospectus regarding that contract, agreement or document is qualified by reference to the exhibit. The SEC maintains an Internet website that contains the registration statement of which this prospectus forms a part, as well as the exhibits thereto. These documents, along with future reports, proxy statements and other information about us, are available at the SEC's website, www.sec.gov. The information on the SEC's web site is not part of this prospectus, and any references to this web site or any other web site are inactive textual references only.

Upon completion of this offering, we will become subject to the information and reporting requirements of the Exchange Act, 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 SEC's website referred to above. We also maintain a website at www.contineum-tx.com, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained on, or that can be accessed through, our website is not a part of this prospectus. Investors should not rely on any such information in deciding whether to purchase our Class A common stock. We have included our website address in this prospectus solely as an inactive textual reference.

CONTINEUM THERAPEUTICS, INC.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Contineum Therapeutics, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Contineum Therapeutics, Inc. (the "Company") as of December 31, 2022 and 2023, the related statements of operations and comprehensive income (loss), convertible preferred stock and stockholders' deficit, and cash flows for 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 at December 31, 2022 and 2023, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

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/ Ernst & Young LLP

We have served as the Company's auditor since 2020.

San Diego, California
February 15, 2024

except for the last paragraph of Note 2, as to which the date is
April 1, 2024.

CONTINEUM THERAPEUTICS, INC.
BALANCE SHEETS
(in thousands, except share and par value data)

	December 31, 2022	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents	$ 5,569	$ 15,526
Marketable securities	41,670	109,664
Prepaid expenses and other current assets	1,153	2,516
Total current assets	48,392	127,706
Property and equipment, net	431	678
Other long-term assets	129	1,283
Operating lease right-of-use assets	1,684	719
Total assets	$ 50,636	$ 130,386
Liabilities, convertible preferred stock and stockholders' deficit		
Current liabilities:		
Accounts payable	$ 430	$ 635
Accrued expenses	2,062	4,385
Current portion of long-term debt, net	3,948	—
Current portion of operating lease liabilities	1,110	464
Total current liabilities	7,550	5,484
Investor rights and obligations liability	2,867	—
Other long-term liabilities	158	110
Operating lease liabilities, net of current portion	791	108
Total liabilities	11,366	5,702
Commitments and contingencies (See Note 12)		
Convertible preferred stock, $0.001 par value; authorized shares—11,938,092 and 16,940,594 at December 31, 2022 and December 31, 2023; issued shares and outstanding shares—11,889,674 and 15,906,236 at December 31, 2022 and December 31, 2023; $193,462 aggregate liquidation preference at December 31, 2023	132,482	192,620
Stockholders' deficit:		
Common stock, $0.001 par value; authorized shares—28,732,204 and 39,630,511 at December 31, 2022 and December 31, 2023; issued shares—2,300,682 and 2,349,554 at December 31, 2022 and December 31, 2023; outstanding shares—2,259,734 and 2,349,554 at December 31, 2022 and December 31, 2023	2	2
Additional paid-in-capital	4,726	7,098
Accumulated deficit	(97,864)	(75,144)
Accumulated other comprehensive income (loss)	(76)	108
Total stockholders' deficit	(93,212)	(67,936)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 50,636	$ 130,386

The accompanying notes are an integral part of these financial statements.

CONTINEUM THERAPEUTICS, INC.
STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)
(in thousands, except share and per share data)

	Years Ended December 31,	
	2022	2023
Revenue		
License revenue	$ —	$ 50,000
Operating expenses:		
Research and development	16,894	27,603
General and administrative	5,826	6,320
Total operating expenses: .	22,720	33,923
Income (loss) from operations	(22,720)	16,077
Other income (expense):		
Interest income	761	4,606
Interest expense	(388)	(208)
Change in fair value of preferred stock warrant liability	3	5
Change in fair value of investor rights and obligations liability	(1,817)	2,867
Other expense, net	(92)	(177)
Total other income (expense)	(1,533)	7,093
Income (loss) before income taxes	(24,253)	23,170
Provision for income taxes	—	450
Net income (loss)	$ (24,253)	$ 22,720
Other comprehensive income (loss):		
Unrealized gain (loss) on marketable securities	(41)	184
Comprehensive income (loss)	$ (24,294)	$ 22,904
Net income (loss) attributable to common stockholders, basic	$ (24,253)	$ 3,146
Net income (loss) attributable to common stockholders, diluted	$ (24,253)	$ 274
Net income (loss) per share, basic	$ (10.81)	$ 1.36
Net income (loss) per share, diluted	$ (10.81)	$ 0.08
Weighted-average common shares outstanding, basic	2,243,066	2,308,972
Weighted-average common shares outstanding, diluted	2,243,066	3,395,514

The accompanying notes are an integral part of these financial statements.

CONTINEUM THERAPEUTICS, INC.
STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
(in thousands, except share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Gain (Loss)	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance at December 31, 2021	11,889,674	$ 132,482	2,198,360	$ 2	$ 2,750	$ (35)	$ (73,611)	$ (70,894)
Vesting of shares of common stock subject to repurchase	—	—	59,587	—	34	—	—	34
Exercise of stock options	—	—	1,787	—	15	—	—	15
Stock-based compensation expense	—	—	—	—	1,927	—	—	1,927
Net loss	—	—	—	—	—	—	(24,253)	(24,253)
Unrealized loss on marketable securities	—	—	—	—	—	(41)	—	(41)
Balance at December 31, 2022	11,889,674	$ 132,482	2,259,734	$ 2	$ 4,726	$ (76)	$ (97,864)	$ (93,212)
Vesting of shares of common stock subject to repurchase	—	—	22,364	—	22	—	—	22
Issuance of Series C convertible preferred stock, net of offering costs of $110	4,016,562	60,138	—	—	—	—	—	—
Exercise of stock options	—	—	70,136	—	159	—	—	159
Stock-based compensation expense	—	—	—	—	2,219	—	—	2,219
Repurchase of stock options	—	—	(2,680)	—	(28)	—	—	(28)
Net income	—	—	—	—	—	—	22,720	22,720
Unrealized gain on marketable securities	—	—	—	—	—	184	—	184
Balance at December 31, 2023	15,906,236	$ 192,620	2,349,554	$ 2	$ 7,098	$ 108	$ (75,144)	$ (67,936)

CONTINEUM THERAPEUTICS, INC.
STATEMENTS OF CASH FLOWS
(in thousands)

	Years Ended December 31,	
	2022	2023
Operating activities		
Net income (loss)	$(24,253)	$ 22,720
Adjustments to reconcile net income (loss) to cash used in operating activities:		
Depreciation and amortization	329	195
Non-cash operating lease expense	926	965
Stock-based compensation	1,927	2,219
Non-cash interest expense	1	—
Amortization (accretion) of debt discount and debt issuance costs	154	(198)
Amortization (accretion) of premiums/discounts on investments, net	252	(2,675)
Change in fair value of preferred stock warrant liability	(3)	(5)
Change in fair value of investor rights and obligations liability	1,817	(2,867)
Loss on disposal of property and equipment	2	—
Gain (loss) on marketable securities	(6)	19
Changes in operating assets and liabilities		
Prepaid expenses and other current assets	(378)	(1,277)
Other long-term assets	(32)	7
Accounts payable	(230)	—
Accrued expenses	298	1,594
Other long-term liabilities	(215)	(20)
Operating lease liabilities	(710)	(1,328)
Net cash provided by (used in) operating activities	(20,121)	19,349
Investing activities		
Purchase of property and equipment	(118)	(414)
Purchases of marketable securities	(64,699)	(141,866)
Sales and maturities of marketable securities	87,116	76,712
Net cash provided by (used in) investing activities	22,299	(65,568)
Financing activities		
Proceeds from issuance of Series C convertible preferred stock, net of offering costs	—	60,138
Payments of deferred offering costs	—	(343)
Principal payments on debt	(1,250)	(3,750)
Proceeds from exercise of stock options .	15	159
Repurchase of restricted stock	(4)	(28)
Net cash provided by (used in) financing activities	(1,239)	56,176
Net increase in cash and cash equivalents	939	9,957
Cash and cash equivalents at beginning of year	4,630	5,569
Cash and cash equivalents at end of year	$ 5,569	$ 15,526
Supplemental disclosure of cash flow information		
Income taxes paid	$ —	$ 450
Interest paid	$ 225	$ 150
Supplemental disclosure of noncash investing and financing activities		
Deferred offering costs included in accounts payable and accrued liabilities	$ —	$ 905
Property and equipment purchases included in accounts payable	$ —	$ 30
Right-of-use assets obtained in exchange for lease liabilities	$ 2,610	$ —

The accompanying notes are an integral part of these financial statements.

NOTES TO AUDITED FINANCIAL STATEMENTS

1. Organization and Basis of Presentation

Organization and Nature of Operations

Contineum Therapeutics, Inc. (the "Company"), is a clinical stage biopharmaceutical company focused on discovering and developing novel, oral small molecule therapies for neuroscience, inflammation and immunology indications with high unmet need. The Company, formerly named Sirocco Therapeutics, Inc. ("Sirocco" or "legacy Sirocco"), Inception 3, Inc. ("Inception") and Versense Pharmaceuticals, Inc. ("Versense"), was incorporated in the state of Delaware in 2009 as Versense. Versense changed its name to Inception on October 25, 2011, and commenced active operations on July 13, 2012. In May 2018, Inception changed its name to Sirocco. A separate entity named Pipeline Therapeutics, Inc. ("legacy Pipeline") was founded and incorporated in the state of Delaware on May 9, 2017. On May 7, 2019, legacy Sirocco acquired legacy Pipeline in a merger transaction (the "Merger"). As of December 31, 2019, legacy Pipeline was a wholly owned subsidiary of legacy Sirocco. In January 2020, legacy Pipeline was merged into legacy Sirocco and ceased to exist, and legacy Sirocco changed its name to Pipeline Therapeutics, Inc. In November 2023, Pipeline Therapeutics, Inc. changed its name to Contineum Therapeutics, Inc.

Liquidity and Capital Resources

Since its inception, the Company has devoted substantially all its resources to research and development activities, business planning, establishing and maintaining its intellectual property portfolio, hiring personnel, raising capital to support and expand such activities and providing general and administrative support for these operations. The Company incurred a net loss of $24.3 million for the year ended December 31, 2022 and net income of $22.7 million for the year ended December 31, 2023 due to a license agreement, dated February 3, 2023, by and between the Company and Johnson and Johnson Innovative Medicine (the "J&J License Agreement"). The Company had an accumulated deficit of $75.1 million as of December 31, 2023. From its inception through December 31, 2023, the Company has financed its operations primarily through issuance of convertible promissory notes, convertible preferred stock financings, a term loan and the J&J License Agreement.

As of December 31, 2023, the Company had cash, cash equivalents and marketable securities of $125.2 million. Management believes that it has sufficient working capital on hand to fund operations through at least the end of 2025.

As the Company continues to pursue its business plan, it expects to finance its operations through both public and private sales of equity, debt financings or other commercial arrangements, which could include income from collaborations, strategic partnerships or marketing, distribution, licensing or other strategic arrangements with third parties. However, there can be no assurance that any additional financing or strategic transactions will be available to the Company on acceptable terms, if at all. If events or circumstances occur such that the Company does not obtain additional funding, it may need to delay, reduce or eliminate its product development or future commercialization efforts, which could have a material adverse effect on the Company's business, results of operations, financial condition and cash flows. Further, if the Company raises funds through licensing or other similar arrangements with third parties, it may be required to relinquish valuable rights to its technology, future revenue streams, research programs or drug candidates or may be required to grant licenses on terms that may not be favorable to it and/or may reduce the value of its common stock.

Basis of Presentation

The Company's financial statements are prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP").

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the Company's financial statements and accompanying notes. Accounting estimates and management judgments reflected in the financial statements include: the accrual of research and development expenses; the incremental borrowing rate used to recognize the right-of-use assets and lease liabilities, the fair value of common stock and convertible preferred stock; stock-based compensation; and the fair value of the investor preferred stock purchase rights and obligations liability. Although these estimates are based on the Company's knowledge of current events and actions it may undertake in the future, actual results may materially differ from these estimates and assumptions.

Concentration of Credit Risk

Financial instruments which potentially subject the Company to significant concentration of credit risk consist of cash, cash equivalents and marketable securities. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits. The Company has not experienced any losses in such accounts, and management believes that the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which those deposits are held. However, to the extent the Company holds cash deposits in amounts that exceed the FDIC insurance limitation, it may incur a loss in the event of a failure of any of the financial institutions where it maintains deposits.

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as a change in equity during a period from transactions and other events and circumstances from non-owner sources.

Fair Value of Financial Instruments

The accounting guidance defines fair value, establishes a consistent framework for measuring fair value, and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. 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. 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 liability.

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less at the date of purchase to be cash equivalents. Cash equivalents primarily represent funds invested in readily available money market accounts and short-term securities. As of December 31, 2022 and 2023, the Company had cash and cash equivalents balances deposited at major financial institutions.

Marketable Securities

The Company classifies all marketable debt securities as available for sale, as the sale of such securities may be required prior to maturity. These marketable securities are carried at fair value, with unrealized gains and losses reported in accumulated other comprehensive income (loss) until realized. The cost of debt securities is adjusted for amortization of premiums and accretion of discounts to

maturity. Such amortization and accretion, as well as interest and dividends, are included in interest income. Realized gains and losses from the sale of available for sale securities, if any, are determined on a specific identification basis and are also included in interest income. The Company's marketable securities are classified as current assets, even though the stated maturity date may be one year or more beyond the current balance sheet date, which reflects management's ability and intent to use the proceeds from sales of these securities to fund its operations, as necessary.

Property and Equipment, Net

Property and equipment, which consist of leasehold improvements, furniture and fixtures, research equipment, computers and software are stated at cost less accumulated depreciation and amortization. Depreciation and amortization are calculated using the straight-line method over the estimated useful lives of the assets, which ranges from two to five years. Leasehold improvements are amortized over the shorter of the estimated useful life of the asset and remaining life of the lease for leasehold improvements at the time the asset is placed into service.

Leases

The Company applies Accounting Standards Codification ("ASC") 842, *Leases* which requires the Company to determine if a contract contains a lease at the inception of the contract and evaluate each lease agreement to determine whether the lease is an operating or finance lease. For leases where the Company is the lessee, right-of-use ("ROU") assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent an obligation to make lease payments arising from the lease. Liabilities from operating leases are included in current portion of operating lease liabilities, and operating lease liabilities, net of current portion on the accompanying balance sheets (see Note 12 for a summary of the Company's right-of-use-assets and lease liabilities as of December 31, 2023). The Company does not have any financing leases. Short-term leases with an initial term of 12 months or less are not recorded on the balance sheet. The Company does not have material short-term lease costs.

Lease liabilities are measured at the present value of the remaining lease payments discounted using the discount rate for the lease established at the lease commencement date. To determine the present value, the implicit rate is used when readily determinable. For those leases where the implicit rate is not provided, the Company determines an incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments. ROU assets are measured as the present value of the lease payments and also include any prepaid lease payments made and any other indirect costs incurred, and reduced by any lease incentives received. Lease terms may include the impact of options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for operating leases is recognized on a straight-line basis over the lease term. The Company's operating leases are subject to additional variable charges, including common area maintenance, property taxes, property insurance and other variable costs. Variable lease costs are experienced in the period incurred The Company has elected the practical expedient to account for the lease and non-lease components, such as common area maintenance charges, as a single lease component for the Company's facilities leases.

Revenue Recognition

The Company currently has no product revenue. The Company generates revenues from the J&J License Agreement, in which the Company transferred to J&J the worldwide rights to develop, manufacture, and commercialize products containing PIPE-307. Revenue for the J&J License Agreement is recognized in accordance with ASC 606, *Revenue from Contracts with Customers* ("ASC 606"). Revenue is recognized when control of the promised goods or services are transferred to the

customer, in an amount that reflects the consideration the Company expects to be entitled to in exchange for transferring those goods or services. The steps for recognizing revenue consist of: (1) identifying the contract; (2) identifying the distinct performance obligations; (3) determining the transaction price for which the Company expects to be entitled in exchange for the goods and services; (4) allocating the transaction price to the performance obligations in the contract; and (5) recognizing revenue when or as the performance obligations are satisfied.

The Company allocates fixed and variable consideration based on relative standalone selling prices, unless an allocation exception for variable consideration is met. The allocated transaction price is recognized when (or as) each respective performance obligation is satisfied. For performance obligations that are satisfied at a point in time, the Company evaluates the indicators of control in ASC 606 to determine the point in time upon which control is transferred and therefore the performance obligation is satisfied. For performance obligations that are satisfied over time, the Company uses a measure of progress that best reflects the Company's effort in satisfying the respective performance obligation to recognize revenue. The measure of progress is subject to estimates by management and may change over the course of the agreement.

A contract modification is a change in the scope or price (or both) of a contract that is approved by the parties to the contract. A contract modification exists when the rights and obligations that are created or changed by a modification are enforceable. The Company accounts for a contract modification as a separate contract when the scope of the contract increases, and the price of the contract increases by an amount that reflects the standalone selling prices of the additional promised goods or services that are distinct. If a contract modification is not accounted for as a separate contract, the Company's accounting of the contract modification depends on whether the remaining goods or services are distinct from those already provided on or before the date of the contract modification. If the remaining goods or services are distinct from those already provided, the Company accounts for the contract modification as a termination of the existing contract and creation of a new contract. The amount of the consideration to be allocated to the remaining performance obligations consists of the consideration promised by the customer that was included in the estimate of the transaction price for the existing contract and that had not been recognized as revenues and the consideration promised as part of the contract modification. If the remaining goods or services are not distinct from those already provided, the Company accounts for the contract modification as if it were part of the existing contract and accounts for the effect that the contract modification has on the transaction price, and on the measure of progress toward complete satisfaction of the performance obligation, as a cumulative catch-up adjustment at the date of the contract modification.

Contractual Terms for Receipt of Payments

The contractual terms that establish the Company's right to collect specified amounts from its customers and that require contemporaneous evaluation and documentation under U.S. GAAP for the corresponding timing and amount of revenue recognition, are as follows:

(1) ***Upfront License Fees:*** The Company allocates non-refundable license fee consideration to the distinct performance obligations identified in the contract on a relative standalone selling price basis and recognizes those amounts when or as each performance obligation is satisfied. Non-refundable license fee consideration that is allocated to a distinct license of functional intellectual property is recognized at the point in time upon which control of the license transfers to the customer and not before the customer has both access and the is able to use and benefit from the license.

(2) ***Development Milestones:*** The Company utilizes the most likely amount method to estimate the amount of consideration to which it will be entitled for achievement of the development milestones as these represent variable consideration. Variable consideration is included in the transaction price to

the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. For those payments based on development milestones (e.g., patient dosing in a clinical trial or the achievement of statistically significant clinical results), the Company assesses the probability that the milestone will be achieved, including its ability to control the timing or likelihood of achievement, and any associated revenue constraint. Given the high degree of uncertainty around the occurrence of these events, the Company determines the milestone and other contingent amounts to be constrained until it becomes probable that a significant reversal in the amount of cumulative revenue will not occur. At each reporting period, the Company re-evaluates this associated revenue recognition constraint. Any resulting adjustments are recorded to revenue on a cumulative catch-up basis and reflected in the financial statements in the period of adjustment.

(3) ***Regulatory Milestones:*** The Company utilizes the most likely amount method to estimate the consideration to which it will be entitled for achievement of the regulatory milestones as these represent variable consideration. Variable consideration is included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. The Company recognizes regulatory milestones in the period in which it becomes probable that a significant reversal in the amount of cumulative revenue will not occur (the regulatory milestone is no longer constrained). Due to the inherent uncertainty of achieving regulatory approval, associated milestones are deemed constrained for revenue recognition until achievement. At each reporting period, the Company re-evaluates this associated revenue recognition constraint. Any resulting adjustments are recorded to revenue on a cumulative catch-up basis and reflected in the financial statements in the period of adjustment.

(4) ***Royalties:*** Under the sales-or-usage-based royalty exception the Company recognizes revenue based on the contractual percentage of the licensee's sale of products to its customers at the later of (i) the occurrence of the related product sales or (ii) the date upon which the performance obligation to which some or all of the royalty has been allocated has been satisfied or partially satisfied.

(5) ***Sales Threshold Milestones:*** Similar to royalties, applying the sales-or-usage-based royalty exception, the Company recognizes revenue from sales threshold milestones at the later of (i) the period the licensee achieves the one-time annual product sales levels in their territories for which the Company is contractually entitled to a specified lump-sum receipt, or (ii) the date upon which the performance obligation to which some or all of the milestone has been allocated has been satisfied or partially satisfied.

Impairment of Property and Equipment

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset or asset group to be tested for possible impairment, the Company first compares undiscounted cash flows expected to be generated by that asset or asset group to its carrying value. If the carrying value of the long-lived asset or asset group is not recoverable on an undiscounted-cash-flow basis, an impairment is recognized to the extent that the carrying value exceeds its fair value. The Company did not recognize impairment losses for the years ended December 31, 2022 and 2023.

Research and Development

Research and development expenses consist primarily of direct and indirect costs incurred in connection with the Company's discovery efforts, and the preclinical and formulation development of its drug candidates. In the future, the Company expects a substantial portion of its research and development expenses will relate to the clinical development of its drug candidates. Direct costs include contracted research development and manufacturing, consulting fees, license fees, laboratory supplies and other expenses incurred to sustain research and development programs. Indirect costs include salaries, benefits, travel, stock-based compensation charges for those individuals involved in research and development efforts, and associated overhead expenses. Research and development costs are expensed as incurred.

Accrued Research and Development Expense

The Company is required to estimate its expenses resulting from its obligations under contracts with vendors, consultants, and contract research organizations, in connection with conducting research and development activities. The Company reflects research and development expenses in its financial statements by matching those expenses with the period in which services and efforts are expended. The Company accounts for these expenses according to the progress of the activity as measured by the timing of various aspects of the study or related activities. The Company determines accrual estimates through review of the underlying contracts along with preparation of financial models taking into account discussions with research and other key personnel as to the progress of studies, or other services being conducted. During the course of an activity, the Company adjusts its rate of expense recognition if actual results differ from its estimate. Nonrefundable advance payments for goods and services, including fees for process development or manufacturing and distribution of clinical supplies that will be used in future research and development activities, are deferred and recognized as expense in the period that the related services are performed.

Convertible Preferred Stock

The Company records convertible preferred stock at fair value on the dates of issuance, net of issuance costs. Upon the occurrence of certain events that are outside the Company's control, including a deemed liquidation event, holders of the convertible preferred stock can cause redemption for cash or other assets. Therefore, convertible preferred stock is classified outside of stockholders' deficit on the balance sheets as events triggering the liquidation preferences are not solely within the Company's control. The carrying values of the convertible preferred stock are adjusted to their liquidation preferences if and when it becomes probable that such a liquidation event will occur.

Preferred Stock Warrant Liability

The Company has issued a warrant to purchase shares of its convertible preferred stock. Because the underlying convertible preferred stock is classified outside of permanent equity, this warrant is classified as a liability in the accompanying balance sheets as a component of other long-term liabilities. This warrant is recorded at its estimated fair value on the date of issuance and is revalued at each subsequent reporting period, with fair value changes recognized as increases or reductions to other income (expense), net in the accompanying statements of operations and comprehensive income (loss). The Company estimates the fair value of this warrant using the Black-Scholes option pricing model. This method requires certain assumptions be used as inputs, see "Stock-Based Compensation" below.

Investor Rights and Obligations Liability

As part of the Company's Series B convertible preferred stock issuance, an investor agreed to pay a premium for the preferred stock in exchange for certain additional rights and obligations which were not provided to the other Series B convertible preferred stock investors. The Company evaluated these additional rights and obligations and concluded they met the definition of a derivative and therefore these rights and obligations were recorded at their calculated fair value at issuance. The Company initially assessed the fair value of these rights and obligations as the additional premium paid by this investor to acquire these rights and obligations. The investor rights and obligations liability is revalued at each reporting period with changes in the fair value of the liability recorded as change in fair value of investor rights and obligations in the statements of operations and comprehensive income (loss). The noted agreement was amended and replaced in its entirety on November 30, 2022. On April 28, 2023 the Company was notified that an event occurred resulting in the termination of the transfer and put option rights and related obligations. See Note 4 for a discussion on the modification and subsequent termination.

Patent Costs

The Company expenses all costs as incurred in connection with patent applications (including direct application fees, and the legal and consulting expenses related to making such applications) and such costs are included in general and administrative expenses in the statement of operations and comprehensive income (loss).

Stock-Based Compensation

Stock-based compensation expense represents the cost of the grant date fair value of employee, officer, director and non-employee stock option grants, recognized on a straight-line basis over the vesting period. The vesting period generally approximates the expected service period of the awards. The Company recognizes forfeitures as they occur.

The fair value of stock options is estimated using a Black-Scholes valuation model on the date of grant. This method requires certain assumptions be used as inputs, such as the fair value of the underlying common stock, expected term of the option before exercise, expected volatility of the Company's common stock, risk-free interest rate and expected dividend yield. Options granted have a maximum contractual term of ten years. The Company has limited historical stock option activity and therefore estimates the expected term of stock options granted using the simplified method, which represents the arithmetic average of the original contractual term of the stock option and its weighted-average vesting term. The expected volatility of stock options is based upon the historical volatility of a number of publicly traded companies in similar stages of clinical development. The Company will continue to apply this process until a sufficient amount of historical information regarding the volatility of its own stock price becomes available. The risk-free interest rates used are based on the U.S. Treasury yield in effect at the time of grant for zero-coupon U.S. treasury notes with maturities approximately equal to the expected term of the stock options. The Company has historically not declared or paid any dividends and does not currently expect to do so in the foreseeable future, and therefore has estimated the dividend yield to be zero.

Commitments and Contingencies

The Company recognizes a liability with regards to loss contingencies when it believes it is probable a liability has been incurred, and the amount can be reasonably estimated. If some amount within a range of loss appears at the time to be a better estimate than any other amount within the range, the Company accrues that amount. When no amount within the range is a better estimate than any other amount, the Company accrues the minimum amount in the range. The Company has not recorded any such liabilities as of December 31, 2022 and 2023.

Segment Reporting

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker, or decision- making group ("CODM"). The Company has identified its Chief Executive Officer as the CODM who is responsible for making decisions regarding resource allocation and assessing performance. The Company views its operations and manages its business as one operating segment.

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined on the basis of the differences between the financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company recognizes deferred tax assets to the extent that the Company believes these assets are more likely than not to be realized. In making such a determination, management considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. If management determines that the Company would be able to realize its deferred tax assets in the future in excess of their recorded amount, management would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

As of December 31, 2022 and 2023, the Company maintained valuation allowances against its deferred tax assets as the Company concluded it had not met the "more likely than not" to be realized threshold. Changes in the valuation allowance, when they are recognized in the provision for income taxes, may result in a change in the estimated annual effective tax rate.

The Company records uncertain tax positions on the basis of a two-step process whereby (1) management determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, management recognizes the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority. The Company recognizes interest and penalties related to unrecognized tax benefits within income tax expense. Any accrued interest and penalties are included within the related tax liability. As of and for the years ended December 31, 2022 and 2023, the Company had no accrued interest or penalties related to unrecognized tax benefits.

Net Income (Loss) Per Share

Basic net income (loss) per share allocable to commons stockholders is presented in conformity with the two-class method required for participating securities. All classes of outstanding preferred stock are considered participating securities as, in the event a dividend is paid on common stock, the holders of preferred stock would be entitled to receive dividends as the higher of their dividend preference or the amount they would receive if the shares were converted to common stock immediately prior to the dividend. The two-class method determines net income per share for each

class of common and participating securities according to dividends declared or accumulated as well as participation rights in undistributed earnings. The two-class method requires income available to stockholders for the period to be allocated between common and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed. Under the two-class method, any net loss attributable to common stockholders is not allocated to the preferred stock as the holders of the preferred stock do not have a contractual obligation to share in losses.

Basic net income (loss) is calculated by dividing net income (loss) attributable to common stockholders by the weighted-average number of common shares outstanding during the period. Common shares used in diluted net income (loss) per share include the dilutive effect of unvested common stock issued upon the early exercise of stock options, unvested common stock subject to repurchase, common shares potentially issuable upon the exercise of outstanding stock options under the treasury stock method, outstanding warrants under the treasury stock method, convertible preferred stock under the if-converted method, and the investor rights and obligations under the reverse treasury stock method. However, potentially issuable common shares are not used in computing diluted net loss per ordinary share as their effect would be anti-dilutive due to the loss recorded during the year ended December 31, 2022, and therefore diluted net loss per share is equal to basic net loss per share. During the year ended December 31, 2023, diluted net income per share is computed by giving effect to all dilutive potential common shares.

Emerging Growth Company Status

The Company is an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 (“JOBS Act”). Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. The Company has elected to use this extended transition period under the JOBS Act until the earlier of the date the Company (1) is no longer an emerging growth company or (2) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, the Company’s financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

Recently Issued Accounting Pronouncements

In June 2016, the FASB issued ASU 2016-13, Financial Instruments—Credit Losses (Topic 32), Measurement of Credit Losses on Financial Instruments. The standard amends the impairment model by requiring entities to use a forward-looking approach based on expected losses to estimate credit losses for most financial assets and certain other instruments that aren’t measured at fair value through net income. For available-for-sale debt securities, entities will be required to recognize an allowance for credit losses rather than a reduction in carrying value of the asset. Entities will no longer be permitted to consider the length of time that fair value has been less than amortized cost when evaluating when credit losses should be recognized. This new guidance was effective for the Company as of January 1, 2023 and did not have a material impact on its financial statements and related disclosures.

In December 2023, the FASB issued ASU No. 2023-09, “Improvements to Income Tax Disclosures.” ASU 2023-09 requires disaggregated information about a reporting entity’s effective tax rate reconciliation as well as information on income taxes paid. ASU 2023-09 is effective for public entities with annual periods beginning after December 15, 2024 and for private businesses for annual periods beginning after December 15, 2025, with early adoption permitted. The Company is currently evaluating the impact of this guidance on its consolidated financial statements.

Reverse Stock Split

On April 1, 2024, the Company filed an amendment to its certificate of incorporation and effected a 1-for-5.5972 reverse stock split of its capital stock. All share and per-share amounts presented in the financial statements and related notes have been retroactively adjusted to reflect the reverse stock split.

3. Marketable Securities

The Company invests its excess cash in marketable securities, including debt securities, commercial paper, asset-backed securities, yankee debt and U.S. government agencies.

The following table summarizes the amortized cost and fair value of the Company's cash equivalents and marketable securities by major investment category (in thousands).

		As of December 31, 2022			
			Unrealized		
	Maturity in Years	Amortized Cost	Gains	Losses	Fair Value
US Government agency securities	2 years or less	$ 18,210	$ 6	$ (47)	$ 18,169
Corporate debt securities	Less than 1	8,029	1	(37)	7,993
Commercial paper	Less than 1	13,303	—	—	13,303
Asset-backed securities	Less than 1	2,202	4	(1)	2,205
		$ 41,744	$ 11	$ (85)	$ 41,670

		As of December 31, 2023			
			Unrealized		
	Maturity in Years	Amortized Cost	Gains	Losses	Fair Value
US Government agency securities	2 years or less	$ 18,883	$ 11	$ —	$ 18,894
Certificate of deposit	Less than 1	5,232	13	—	5,245
Corporate debt securities	2 years or less	52,310	65	(6)	52,369
Commercial paper	Less than 1	28,108	19	(1)	28,126
Yankee debt	Less than 1	2,445	3	—	2,448
Asset-backed securities	3 years or less	2,576	7	(1)	2,582
		$109,554	$118	$ (8)	$109,664

The Company segments its portfolio based on the underlying risk profiles of their current securities being held. The Company regularly reviews the securities in an unrealized loss position and evaluates the current expected credit loss by considering factors such as historical experience, market data, issuer-specific factors, current and expected future economic conditions. As of December 31, 2023, the Company did not record an allowance for credit loss related to its investment portfolio.

4. Fair Value Measurements

The accounting guidance defines fair value, establishes a consistent framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. 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. 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 liability. As a basis for

considering such assumptions, the accounting guidance establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1—Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.

Level 2—Quoted prices for similar assets and liabilities in active markets, quoted prices in markets that are not active, or inputs which are observable, either directly or indirectly, for substantially the full term of the asset or liability.

Level 3—Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (i.e. supported by little or no market activity).

Assets and liabilities measured at fair value on a recurring basis are as follows (in thousands):

		Fair Value Measurements Using		
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
As of December 31, 2022:				
Cash equivalents	$ 5,434	$ 5,434	$ —	$ —
US Government agency securities	18,169	18,169	—	—
Corporate debt securities	7,993	—	7,993	—
Commercial paper	13,303	—	13,303	—
Asset-backed securities	2,205	—	2,205	—
Investor rights and obligations liability	(2,867)	—	—	(2,867)
Preferred stock warrant liability	(115)	—	—	(115)
	$ 44,122	$ 23,603	$ 23,501	$ (2,982)
As of December 31, 2023:				
Cash equivalents	$ 14,646	$ 14,646	$ —	$ —
US Government agency securities	18,894	16,360	2,534	—
Certificates of deposits	5,245	—	5,245	—
Corporate debt securities	52,369	—	52,369	—
Commercial paper	28,126	—	28,126	—
Yankee Debt	2,448	—	2,448	—
Asset-backed securities	2,582	—	2,582	—
Preferred stock warrant liability	(109)	—	—	(109)
	$124,201	$ 31,006	$ 93,304	$ (109)

The carrying amounts of the Company's financial instruments, including cash, cash equivalents and marketable securities, prepaid and other current assets, accounts payable, and accrued liabilities, approximate fair value due to their short maturities. Included in cash and cash equivalents at December 31, 2022 and 2023 are money market funds with a carrying value and fair value of $4.4 million and $11.8 million, respectively, based upon a Level 1 fair value assessment.

Preferred Stock Warrant Liability

The preferred stock warrant liability (included on the balance sheet under other long-term liabilities) consists of the fair value of a warrant to purchase Series B convertible preferred stock (see Note 8) and was based on significant unobservable inputs, which represent a Level 3 measurement within the fair value hierarchy. The Company's valuation of the preferred stock warrant utilized the Black-Scholes option-pricing model.

The quantitative elements associated with the Company's Level 3 inputs impacting the fair value measurement of the preferred stock warrant liability include the fair value per share of the underlying Series B convertible preferred stock, the remaining contractual term of the warrant, risk-free interest rate, expected dividend yield and expected volatility of the price of the underlying preferred stock. The most significant assumption in the Black-Scholes option-pricing model impacting the fair value of the preferred stock warrant is the fair value of the Company's Series B convertible preferred stock as of each remeasurement date. The Company determines the fair value per share of the underlying preferred stock by taking into consideration its most recent sales of its convertible preferred stock as well as additional factors that the Company deems relevant. The Company historically has been a private company and lacks company-specific historical and implied volatility information of its stock. Therefore, it estimates its expected stock volatility based on the historical volatility of publicly traded peer companies for a term equal to the remaining contractual term of the warrant.

The risk-free interest rate is determined by reference to the U.S. Treasury yield curve for time periods approximately equal to the remaining contractual term of the warrant. The Company has estimated a 0% dividend yield based on the expected dividend yield and the fact that the Company has never paid or declared dividends.

The Company classifies this warrant as a liability on its balance sheets that it remeasures to fair value at each reporting date, and the Company recognizes changes in the fair value of the warrant liability as a component of other income (expense) in its statements of operations and comprehensive loss. The Company will continue to recognize changes in the fair value of the warrant liability until the warrant is exercised, expires or qualifies for equity classification.

Significant increases or decreases in any of these inputs in isolation would result in a significantly different fair value measurement. An increase in the risk-free interest rate, and/or an increase in the remaining contractual term or expected volatility, and/or an increase in the fair value of the convertible preferred stock would result in an increase in the fair value of the warrant.

Investor Rights and Obligations Liability

The investor rights and obligations liability consisted of the fair value of certain investor rights set forth in an agreement (the "Series B Investor 2019 Agreement") between the Company and an investor (the "Series B Investor") who participated in the Company's Series B convertible preferred stock financing. The Company entered into the Series B Investor 2019 Agreement in exchange for a premium paid by the Series B Investor for the shares of the Company's Series B convertible preferred stock (See Note 8) it purchased in November 2019. The total premium paid by the Series B Investor was $0.2 million. The Series B Investor Agreement required the Company to license the intellectual property it owns or controls in a defined geography to the Series B Investor unless the Company either spent $2.0 million in support of the development of its business in such defined geography or the Series B Investor recognized a rate of return of at least 15% per annum on the cash it invested in the Company's Series B convertible preferred stock (the "Qualified Return"). The Series B Investor Agreement provided the Company with certain rights to repurchase the Series B Investor's stock for an amount that represents a Qualified Return or to pay the Series B Investor an amount that results in the Series B Investor achieving a Qualified Return.

The Series B Investor 2019 Agreement was amended and replaced in its entirety on November 30, 2022. As a result of the amendment, the intellectual property license requirement noted above was removed and the updated agreement stated that if the Company completed a Liquidation Event, an Acquisition, or an Asset Transfer, as defined in the amended agreement (collectively referred to as "Transfer Event Right") prior to June 30, 2024, the Series B Investor would be entitled, automatically to receive the greater of (1) the amount payable to the investor in the Transfer Event

Right as a result of its ownership of the shares held by the investor on the effective date of the Transfer Event or (2) an amount equal to a rate of return of 15% per annum for the shares held by the investor on the effective date of the Transfer Event with respect to the investor's initial cash investment in such shares. If no Transfer Event were to take place by June 2024, the Series B investor had a right (to be exercised between June 30, 2024 and July 15, 2024) to sell shares to Company at a 15% rate of return ("Put Option Right"). The amended agreement also noted that if a certain limited partner of the Series B Investor is no longer a limited partner prior to June 30, 2024 then the Transfer Event Right and the Put Option Right noted above would automatically terminate. The Company was informed on May 17, 2023 that the certain limited partner of the Series B Investor was no longer a limited partner of the Series B Investor and therefore the Transfer Event Right and the Put Option Right have terminated. Following the termination of the Transfer Event Right and the Put Option Right due to the change in the limited partner's status in May 2023, the Company settled the Series B Premium liability resulting in a gain of $2.9 million in 2023.

Roll-Forward of Level 3 Financial Instruments

A reconciliation of the Level 3 financial instruments for the year ended December 31, 2023 is as follows (in thousands):

	Preferred Stock Warrant Liability	Investor Rights and Obligations Liability
Balance at December 31, 2021	$ 117	$ 1,050
Change in fair value of preferred stock warrant liability	(2)	—
Change in fair value of investor rights and obligations liability	—	1,817
Balance at December 31, 2022	$ 115	$ 2,867
Change in fair value of preferred stock warrant liability	(5)	—
Change in fair value of investor rights and obligations liability	—	(2,867)
Balance at December 31, 2023	$ 110	$ —

5. Property and Equipment

Property and equipment, net consisted of the following (in thousands):

	December 31, 2022	December 31, 2023
Lab equipment	$ 1,665	$ 2,052
Leasehold improvements	18	48
Computer equipment and software	23	50
Furniture and fixtures	5	5
	1,711	2,155
Less: accumulated depreciation and amortization	(1,280)	(1,477)
Total property and equipment, net	$ 431	$ 678

The Company recognized $0.3 million and $0.2 million in depreciation and amortization expense for the years ended December 31, 2022 and 2023, respectively.

6. Accrued Expenses

Accrued expenses consisted of the following (in thousands):

	December 31, 2022	December 31, 2023
Accrued compensation expenses	$ 1,310	$ 1,904
Accrued research and development expenses	363	1,546
Accrued professional and consulting expenses	303	834
Other accrued expenses	86	101
Total accrued expenses	$ 2,062	$ 4,385

7. Debt

In September 2020, the Company entered into a loan and security agreement (the “Loan Agreement”, and all amounts borrowed thereunder the “Term Loan”) with First Citizens Bank, as administrative and collateral agent, and lender. The Company borrowed $5.0 million at the inception of the Loan Agreement and had the option to borrow an additional $5.0 million upon closing a new capital round of no less than $30.0 million from a syndicate of investors. The option to borrow an additional $5.0 million expired on June 30, 2021.

In June 2023, the Company fully paid the remaining balance of the Term Loan and final prepayment fee of $3.0 million.

8. Convertible Preferred Stock and Stockholders’ Deficit

Under its Amended and Restated Certificate of Incorporation dated April 10, 2023, the Company had a total of 56,571,107 shares of capital stock authorized for issuance, consisting of 39,630,511 shares of common stock, par value of $0.001 per share, and 16,940,595 shares of convertible preferred stock, par value of $0.001 per share. Shares of authorized convertible preferred stock are designated as 1,768,607 shares of Series A convertible preferred stock, 1,429,286 shares of Series A-1 convertible preferred stock, 3,362,377 shares of Series B convertible preferred stock and 10,362,324 shares of Series C convertible preferred stock.

Convertible Preferred Stock

As of December 31, 2022 and 2023, the Company’s Series A, Series A-1, Series B, and Series C convertible preferred stock have been classified as temporary equity in the accompanying balance sheets given that a majority of the Company’s board of director seats are held and/or voted upon by convertible preferred stockholders and they could cause certain events to occur requiring redemption of the preferred stock that are outside of the Company’s control. The Company has not adjusted the carrying values of the convertible preferred stock to the respective liquidation preferences of such shares as the instruments are currently not redeemable and the Company believes it is not probable that the instruments will become redeemable at this point in time. Adjustments to increase the carrying values to the respective liquidation preferences will be made if and when it becomes probable that an event would occur obligating the Company to pay such amounts.

The authorized, issued, and outstanding shares of convertible preferred stock as of December 31, 2023 consist of the following:

	Shares Authorized	Shares Issued and Outstanding	Liquidation Preference (in thousands)
Series A	1,786,607	1,786,604	$ 10,000
Series A-1	1,429,286	1,423,119	11,179
Series B	3,362,377	3,346,607	32,034
Series C	10,362,324	9,349,906	140,249
	16,940,594	15,906,236	$ 193,462

Series B Convertible Preferred Stock

In November 2019, the Company executed a Preferred Stock Purchase Agreement whereby it agreed to issue an aggregate of 3,346,613 shares of Series B convertible preferred stock, at a price of $9.52 per share. From November 2019 through August 2020, the Company issued 2,522,269 shares of its Series B convertible preferred stock at a price of $9.52 per share resulting in total net proceeds of approximately $23.8 million, including issuance costs of $0.2 million. In addition, the Company converted convertible promissory notes plus accrued interest of $4.0 million into 423,984 shares of Series B convertible preferred Stock for $9.52 per share.

Series C Convertible Preferred Stock

In February 2021, the Company issued 5,333,344 shares of its Series C convertible preferred stock, at a price of $15.00 per share, resulting in total net proceeds of approximately $79.7 million, including issuance costs of $0.3 million. From April 2023 through August 2023, the Company issued an additional 4,016,562 shares of its Series C convertible preferred stock, at a price of $15.00 per share, resulting in total net proceeds of approximately $60.1 million, including issuance costs of $0.1 million.

The Company's convertible preferred stock has the following characteristics:

1) Dividends

Holders of the Series A and A-1 convertible preferred stock, in preference to any distributions to the holders of common stock, shall be entitled to receive non-cumulative cash dividends at an annual rate of $0.45 and $0.62 per share, respectively. Holders of the Series B convertible preferred stock, in preference to any distributions to the holders of common stock, Series A, and Series A-1 stock, shall be entitled to receive non-cumulative cash dividends at an annual rate of $0.78 per share. Holders of the Series C convertible preferred stock, in preference to any distributions to the holder of common stock, Series A, Series A-1 and Series B convertible preferred stock shall be entitled to receive non-cumulative cash dividends at an annual rate of $1.18 per share. Such dividends are payable only when and if declared by the Company's board of directors.

No such dividends have been declared or paid through December 31, 2023.

2) Preference on Liquidation

The holders of the Series A, Series A-1, Series B, and Series C convertible preferred stock are entitled to receive liquidation preferences upon the liquidation, dissolution or winding-up of the Company at the greater of 1) the Series A, Series A-1, Series B, and Series C convertible preferred stock original issue prices of $5.60, $7.86, $9.52, $15.00 per share, respectively, plus all accrued and declared but unpaid dividends or 2) the amount that would have been payable had all shares been

converted to common stock immediately prior to such liquidation, dissolution or winding up of the Company. Liquidation payments to the holders of the Series A and Series A-1 convertible preferred stock have priority and are made in preference to any payments to the holders of common stock. Liquidation payments to the holders of the Series B convertible preferred stock have priority and are made in preference to any payments to the holders of common stock, Series A and Series A-1 convertible preferred stock. Liquidation payments to the holders of the Series C convertible preferred stock have priority and are made in preference to any payments to the holders of common stock, Series A, Series A-1, and Series B convertible preferred stock.

After full payment of the liquidation preference to the holders of the Series A, Series A-1, Series B and Series C convertible preferred stock upon the liquidation, dissolution or winding-up of the Company, the remaining assets, if any, will be distributed ratably to all holders of common stock.

3) Conversion Rights

Each share of outstanding Series A, Series A-1, Series B, and Series C convertible preferred stock is convertible into one share of common stock at the option of the holder, subject to certain anti-dilution adjustments. The conversion rate for the convertible preferred stock is determined by dividing the applicable original issue price, as adjusted for stock splits, by the applicable conversion price. The conversion price is initially the original issue price for such series of convertible preferred stock, but is subject to adjustment for dividends, stock splits, and other distributions. The conversion rate at December 31, 2023 for the Series A, Series A-1, Series B, and Series C convertible preferred stock was 1:1.

Each share of Series A, Series A-1, Series B, and Series C convertible preferred stock will be automatically converted into common stock at the then effective conversion rate (i) immediately upon the closing of a firmly underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale of common stock for the account of the Company in which the gross cash proceeds to the Company are at least $50.0 million or (ii) upon written request for such conversion from the Requisite Investors (defined under the terms of the convertible preferred stock as at least 60% of the holders of preferred stock).

4) Redemption Rights

The holders of Series A, Series A-1, Series B and Series C convertible preferred stock do not have any redemption rights.

5) Voting

The holder of each share of Series A, Series A-1, Series B and Series C convertible preferred stock generally vote together with the shares of common stock as a single class, but also have class vote approval rights as provided by the Company's certificate of incorporation or as required by applicable law.

Common Stock

As of December 31, 2023, of the authorized 39,630,512 shares of common stock, 2,349,554 shares of Class A common stock were issued and outstanding. No shares of Class B common stock are outstanding. The Company has two classes of common stock: the Class A common stock and Class B common stock. Class A common stock has one vote per share and Class B common stock has no votes per share. The fair value of the Company's Class A common stock was approximately $10.58 and $11.47 per share as of December 31, 2022 and December 31, 2023, respectively, and was determined in part based on third-party valuations.

Voting, dividend, and liquidation rights of the holders of the common stock are subject to, and qualified by, the rights, preferences and privileges of the holders of the convertible preferred stock. The

holders of the common stock are entitled to one vote for each share of common stock held at all meetings of stockholders.

Common stock reserved for future issuance consisted of the following:

	As of December 31, 2023
Convertible preferred stock	15,906,236
Common stock options granted and outstanding	2,674,405
Shares available for issuance under the 2012 Incentive Plan	502,491
Preferred stock warrant	15,764
Total common stock reserved for future issuance	19,098,896

Stock Options

In 2012, the Company adopted the 2012 Equity Incentive Plan (the "Plan"), which allowed for the issuance of incentive stock options ("ISOs"), nonstatutory stock options ("NSOs"), stock appreciation rights, restricted stock, restricted stock units, and other stock awards (collectively "Stock Awards"). The Plan was established to secure and retain the services of the group of persons eligible to receive Stock Awards and to provide additional incentives to its employees, directors, and consultants of the Company. Under the Plan, the Company can offer ISOs to employees and NSOs to employees, non-employee directors, and consultants. The Plan allows the Company to issue stock awards for shares of its common stock up to a total of 3,429,327 shares, subject to appropriate adjustments for stock splits, combinations and other similar events for issuance pursuant to awards made under the Plan.

Under the Plan, the exercise price of each ISO shall be established in the sole discretion of the Company's board of directors (or any of the committees of the Company's board of directors); provided, however, that (i) the exercise price per share for an ISO shall not be less than the fair market value for shares of the Company's common stock on the date of grant and (ii) the exercise price per share of an ISO granted to an optionee who on the date of the grant owns stock possessing more than 10% stockholder of the Company shall not be less than 110% of the fair market value of a share of its common stock on the date of grant and the option shall not be exercisable after five years from the date of grant.

The options that are granted under the Plan are exercisable at various dates as determined upon grant and terminate within ten years of the date of grant, unless the optionee owns 10% or more of the common shares at which point the expiration period is 5 years, or upon the employee's termination (whereupon the terminated employee has ninety days after termination to exercise vested options from the date of termination). The vesting period generally occurs over four years.

Stock option activity under the Plan is as follows:

	Options Outstanding	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value (in thousands)
Balance at December 31, 2022	2,200,602	$ 4.48	7.22	$ 13,453
Options granted	591,367	10.80	—	—
Options exercised	(70,135)	2.24	—	—
Options cancelled and forfeited	(26,651)	9.24	—	—
Options expired	(20,778)	1.06	—	—
Balance at December 31, 2023	2,675,405	$ 5.93	7.14	$ 14,888
Options Vested and Expected to Vest as of December 31, 2023	2,674,405	$ 5.93	7.14	$ 14,888
Options Exercisable as of December 31, 2023	2,028,526	$ 4.37	6.36	$ 14,399

The aggregate intrinsic value of options exercised during the year ended December 31, 2022 and 2023 was $3.8 thousand and $0.6 million, respectively, determined as of the date of exercise. Options exercisable includes options which are not vested, but are available to be early exercised as of December 31, 2023.

The Company estimated the fair value of stock options using the Black-Scholes valuation model. The Company accounts for any forfeitures of options when they occur. Previously recognized compensation expense for an award is reversed in the period that the award is forfeited. The fair value of stock options was estimated using the following weighted-average assumptions:

	For the Year Ended December 31, 2022	For the Year Ended December 31, 2023
Assumptions:		
Expected term (in years)	5.8	6.08
Expected volatility	88.38%	94.57%
Risk free interest rate	2.64%	4.74%
Dividend yield	—	—

The weighted-average grant-date fair value per share of stock options granted during the year ended December 31, 2022 and 2023 was $1.11 and $1.53 per share, respectively. The Company recorded $1.0 million and $0.9 million in stock-based compensation expense in general and administrative and research and development, respectively, for the year ended December 31, 2022. The Company recorded $1.2 million and $1.0 million in stock-based compensation expense in general and administrative and research and development, respectively, for the year ended December 31, 2023.

As of December 31, 2023 there was approximately $6.6 million of total unrecognized stock-based compensation expense related to awards granted under the Plan, which is expected to be recognized over a weighted-average period of approximately 1.3 years.

Liability for Early Exercise of Restricted Stock Options

Certain individuals were granted the ability to early exercise their stock options. The shares of common stock issued from the early exercise of unvested stock options are restricted and continue to vest in accordance with the original vesting schedule. The Company has the option to repurchase any

unvested shares at the original purchase price upon any voluntary or involuntary termination. The shares purchased by the employees and non-employees pursuant to the early exercise of stock options are not deemed, for accounting purposes, to be outstanding until those shares vest. The cash received in exchange for exercised and unvested shares related to stock options granted is recorded as a liability for the early exercise of stock options on the accompanying balance sheets and will be transferred into common stock and additional paid-in capital as the shares vest. As of December 31, 2022 and 2023, 23,031 and zero, respectively, unvested shares issued under early exercise provisions were subject to repurchase by the Company. As of December 31, 2022 and 2023, the Company recorded $23,000 and $0, respectively, associated with shares issued with repurchase rights in other long-term liabilities.

9. Income Taxes

The following is a reconciliation between the provision for income taxes and income taxes computed using the U.S. federal statutory corporate tax rate for the years ended December 31, 2022 and 2023 is as follows (in thousands):

	Year Ended December 31, 2022	Year Ended December 31, 2023
Expected tax benefit at statutory rate	$ (5,094)	$ 4,886
State income tax, net of federal benefit	(1,483)	5
Change in fair value of investor rights and obligations liability	379	(602)
Permanent differences	214	127
Research credits	(929)	(1,140)
IRC Sec. 382 & 383 adjustments	551	—
Change in valuation allowance	6,362	(2,826)
	$ —	$ 450

The tax provision for the year ended December 31, 2022 consisted of state minimum taxes. For the year ended December 31, 2023, the Company recorded $0.4 million of current federal tax expense due to tax law limitations on the ability to fully utilize net operating loss and research and development credit carryforwards against taxable income.

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities as of December 31, 2022 and 2023 are as follows:

	Year Ended December 31, 2022	Year Ended December 31, 2023
Deferred tax assets:		
Net operating loss carryforwards	$ 20,208	$ 12,498
Research and development credit carryforwards	4,259	4,476
Capitalized research and development	3,003	7,469
Lease liabilities	399	120
Other, net	729	1,018
Total deferred tax assets	28,597	25,580
Valuation allowance	(28,193)	(25,328)
Deferred tax assets, net of valuation allowance	404	252
Deferred tax liabilities:		
Property and equipment	(50)	(101)
Right-of-use assets	(354)	(151)
Total deferred tax liabilities	(404)	(252)
Net deferred tax assets/(liabilities)	$ —	$ —

The Company has established a valuation allowance against its net deferred tax assets due to the uncertainty surrounding the realization of such assets. The Company periodically evaluates the recoverability of the deferred tax assets. At such time as it is determined that it is more likely than not that deferred tax assets are realizable, the valuation allowance will be reduced. The Company has recorded a full valuation allowance of $28.2 million and $25.3 million as of December 31, 2022 and 2023, respectively, as it does not believe it is more likely than not that certain deferred tax assets will be realized primarily due to the generation of pre-tax book losses, no ability to carryback losses, the lack of feasible tax-planning strategies, the limited existing taxable temporary differences, and the subjective nature of forecasting future taxable income into the future.

At December 31, 2023, the Company had federal and California tax loss carry forwards of approximately $37.3 million and $81.4 million, respectively. Out of the total federal net operating losses, approximately $37.3 million were generated after January 1, 2018, and therefore do not expire. Net operating losses generated after January 1, 2018, are subject to 80% limitation in accordance with the Tax Cuts and Jobs Act of 2017. The remaining federal and state net operating loss carry forwards begin to expire in 2035 and 2036, respectively, if unused.

At December 31, 2023, the Company had federal and state research and development tax credit carry forwards of approximately $3.5 million and $2.7 million, respectively. The Company has not performed a formal research and development credit study with respect to these credits. The federal credits will begin to expire in 2032, if unused, and the state credits carry forward indefinitely.

Pursuant to the Internal Revenue Code (“IRC”) of 1986, as amended, specifically IRC §382 and IRC §383, the Company’s ability to use net operating loss and R&D tax credit carry forwards (“tax attribute carry forwards”) to offset future taxable income is limited if the Company experiences a cumulative change in ownership of more than 50% within a three-year testing period. The Company has completed an ownership change analysis pursuant to IRC Section 382 and identified that ownership changes occurred in July 2012, April 2018, March 2019 and February 2021. The Company’s deferred tax assets related to the tax attributes impacted have been adjusted through December 31, 2021 based on such analysis. As a result of limitations arising from the prior ownership changes, $0.5 million of federal and $3.7 million of California net operating loss carry-forwards were removed from the inventory of deferred tax assets. In addition, $0.2 million of federal R&D tax credits were removed as of December 31, 2022. If further ownership changes within the meaning of IRC Section 382 are identified as having occurred, the amount of remaining tax attribute carry-forwards available to offset future taxable income and income tax expense in future years may be significantly restricted or eliminated. Further, the Company’s deferred tax assets associated with such tax attributes could be significantly reduced upon realization of an ownership change within the meaning of IRC §382.

The following table summarizes the reconciliation of the unrecognized tax benefits activity during the years ended December 31, 2022 and 2023 (in thousands):

	Year Ended December 31, 2022	Year Ended December 31, 2023
Unrecognized tax benefits—beginning	$ 2,417	$ 2,749
Gross increases—tax positions in current period	332	357
Decreases related to prior year positions	(1)	(532)
Unrecognized tax benefits—ending	$ 2,749	$ 2,574

The unrecognized tax benefit amounts are reflected in the determination of the Company’s deferred tax assets. If recognized, none of these amounts would affect the Company’s effective tax

rate, since it would be offset by an equal corresponding adjustment in the deferred tax asset valuation allowance. The Company does not foresee material changes to its liability for uncertain tax benefits within the next twelve months.

During the year ended December 31, 2023, the Company reduced their reserve against research and development credits generated prior to 2022 as a result of the completion of a formal study of research and development credits generated through that period. The reduction in the reserve for uncertain tax positions was fully offset by an offsetting increase in the valuation allowance against research and development credit carryforwards resulting in no net tax provision impact from the change in the reserve.

The Company's policy is to recognize interest and/or penalties related to income tax matters in income tax expense. The Company had no accrual for interest or penalties on the Company's balance sheets as of December 31, 2022 and 2023 and has not recognized interest and/or penalties in the statement of operations and comprehensive income (loss) for the years ended December 31, 2022 and 2023.

All tax years for both federal and state purposes remain open and subject to examination by tax jurisdictions.

10. License Agreement

In February 2023, the Company entered into the J&J License Agreement, pursuant to which the Company granted J&J an exclusive, worldwide license to develop, manufacture and commercialize PIPE-307 in all indications. The agreement allows the Company to elect, at its sole discretion and cost, to conduct a Phase 2 trial of PIPE-307 for patients with multiple sclerosis. After such trial, J&J may, at its sole discretion, further develop PIPE-307 for patients with multiple sclerosis. Additionally, upon J&J deciding to conduct a first Phase 3 clinical trial for a product using PIPE-307, the agreement allows the Company the option to co-fund a portion of all Phase 3 and subsequent development costs for PIPE-307, with such cost capped annually. If the Company opts to fund such development costs, then the royalties the Company is eligible to receive will increase. Pursuant to the terms of the agreement, the Company received an upfront, non-refundable and non-creditable payment of $50.0 million upon transferring the license and know-how, existing inventory and manufacturing technology. The Company is also eligible to receive approximately $1.0 billion in non-refundable, non-creditable milestone payments. Additionally, the Company is eligible to receive tiered royalties in the low-double digit to high-teen percent range on net sales of products containing PIPE-307.

Under the Preferred Stock Purchase Agreement, the Company sold approximately 1.7 million shares of series C convertible preferred stock to JJDC, an affiliate of J&J, at $15.00 per share, for an aggregate purchase price of approximately $25.0 million, in April 2023. The Company determined that this preferred stock purchase was at fair value as other new investors purchased shares of preferred stock at the same price.

The Company concluded that J&J represented a customer and applied relevant guidance from ASC 606 to evaluate the appropriate accounting for the J&J License Agreement. The Company evaluated the J&J agreement and concluded that it had promises to transfer a license of functional intellectual property, know-how, existing inventory and manufacturing technology (each of which was determined to be a distinct performance obligation). Control of the promised goods was transferred to J&J in the second quarter of 2023, and the $50 million upfront payment was recognized in May 2023 upon satisfaction of the performance obligations. The remaining consideration consists of future contingent milestone-based payments and sales-based royalties. As of December 31, 2023, all variable consideration under the J&J License Agreement was fully constrained.

In August 2023, the Company elected to conduct a Phase 2 trial using PIPE-307 for patients with multiple sclerosis, which was considered a contract modification under the accounting guidance that added promised goods or services that are distinct at a price that is below the standalone selling price. Therefore, the Company accounted for the modification as a termination of the existing contract and creation of a new contract. Accordingly, the amount of consideration to be allocated to the remaining performance obligations consists of future contingent milestone-based payments and sales-based royalties, all of which were constrained. The only remaining performance obligation is the promise to conduct the Phase 2 trial as the other performance obligations had been satisfied prior to the modification date. Accordingly, the variable consideration allocated to the Phase 2 trial will be recognized as the study is completed using a cost-based measure of progress and when the amounts are no longer probable of a significant reversal. As of December 31, 2023, no amounts had been recognized related to the Phase 2 trial.

11. Related Party Transactions

In the second quarter of 2023, the Company issued 1,860,999 shares of its Series C convertible preferred stock for total cash proceeds of $27.9 million to three significant stockholders two that have designated members on the Company's board of directors and each of whom is considered to be a related party (see Note 8).

12. Commitments and Contingencies

Operating Lease

The Company leases office and lab space in San Diego, California under a non-cancelable operating lease ("Science Center Drive Lease"). The lease commenced in March 2018 and has a 5-year initial term. The lease includes a renewal option, which includes an option to renew for five additional years. During the quarter ended June 30, 2021, the Company amended the lease to include additional space in the building with the right to use the new space beginning in October 2021, for an additional 3 years. Base rent for the new unit was abated for the first three months of the lease term and thereafter is $0.05 million per month during the first year of the lease term, with specified annual increases thereafter. This amendment extended the original leased office space term from June 2023 to September 2024.

In October 2023, the Company executed a noncancelable operating lease for new premises to be used for office, research and development and laboratory purposes, with the same landlord as the Science Center Drive Lease. The lease is currently scheduled to commence in September 2024 and has a five-year term with an option to extend for another three-year period subject to certain conditions. As a result of the new lease, the Company received rent abatement from January until occupancy of the new space for its existing Science Center Drive Lease. This resulted in a modification of the Science Center Drive Lease and a remeasurement of the existing lease liability and the associated right-of-use asset in October 2023. As a result, $0.6 million from the future payments of the new lease were allocated to the Science Center Drive Lease, based on a relative standalone selling price analysis. The new lease is currently scheduled to commence in September 2024 and currently has no associated ROU asset or lease liability as the Company does not have access to the building and does not own any ongoing tenant improvements. The new ROU asset will be recorded upon occupancy of the space.

Below is a summary of the Company's right-of-use assets and lease liabilities for the Science Center Drive Lease (in thousands, except for years and %):

	Year Ended December 31, 2022	Year Ended December 31, 2023
Right of use assets	$ 1,684	$ 719
Lease liability obligations, current	1,110	464
Lease liability obligations, less current portion	791	108
Total lease liability obligations	$ 1,901	$ 572
Weighted-average remaining lease term	1.7	0.8
Weighted-average discount rate	7.4%	9.0%

During the years ended December 31, 2022 and 2023, the Company recognized $0.9 million and $0.9 million, respectively, in operating lease expenses, which are included in operating expenses in the Company's statements of operations and comprehensive income (loss).

Future minimum lease payments for the Company's Science Center Drive operating lease as of December 31, 2023 were as follows (in thousands):

Years ending December 31:	
2024	$252
2025	372
Total minimum lease payments	624
Less : amount representing interest	52
Total lease liability obligations	$572

The following table summarizes the Company's future lease obligations under the new lease agreement (in thousands):

Years ending December 31,	New Lease
2024	$ 252
2025	1,523
2026	1,568
2027	1,615
2028 and beyond	2,814
Total	$ 7,771

Litigation

The Company, from time to time, may be involved in legal proceedings, regulatory actions, claims and litigation arising in the ordinary course of business. The Company was not a defendant in any pending or threatened lawsuit for the years ended December 31, 2022 and 2023.

Other Commitments

The Company has various manufacturing, clinical, research and other contracts with vendors in the conduct of the normal course of its business. Such contracts are generally terminable with advanced written notice and payment for any products or services received by the Company through

the effective time of termination and any non-cancelable and non-refundable obligations incurred by the vendor at the effective time of the termination. In the case of terminating a clinical trial agreement at a particular site, the Company would also be obligated to provide continued support for appropriate medical procedures at that site until completion or termination.

13. Net Income (Loss) Per Share

The following table sets forth the computation of the basic and diluted net loss per share (in thousands, except share and per share amounts):

	Year Ended December 31, 2022	Year Ended December 31, 2023
Numerator, basic:		
Net income (loss)	$ (24,253)	$ 22,720
Allocation of earnings to participating preferred stockholders	—	19,574
Net income (loss) applicable to common stockholders	$ (24,253)	$ 3,146
Denominator, basic:		
Weighted average common shares issued	2,282,997	2,313,115
Less: weighted average unvested common stock issued upon early exercise of stock options	(36,515)	(4,143)
Less: weighted average unvested common stock subject to repurchase.	(3,416)	—
Weighted average shares used to compute net income (loss) per common share, basic	2,243,066	2,308,972
Numerator, diluted:		
Net income (loss) attributable to common stockholders	$ (24,253)	$ 3,146
Change in fair value of preferred stock warrant liability	—	(5)
Change in fair value of investor rights and obligations liability	—	(2,867)
Net income (loss) applicable to common stockholders	$ (24,253)	$ 274
Denominator, diluted:		
Weighted average shares used to compute net income (loss) per common share, diluted	2,243,066	2,308,972
Common stock options	—	998,452
Unvested common stock issued upon early exercise of stock options	—	4,143
Preferred stock warrants (as converted to common stock)	—	1,695
Investor rights and obligations	—	82,249
Weighted average shares used to compute net income (loss) per common share, diluted	2,243,066	3,395,514
Net income (loss) per share, basic	$ (10.81)	$ 1.36
Net income (loss) per share, diluted	$ (10.81)	$ 0.08

The Companys potentially dilutive securities, which include convertible preferred stock, preferred stock warrants, common stock issued upon early exercise of stock options, common stock subject to repurchase, common stock options, and the investor rights and obligations liability, have been excluded from the computation of diluted net loss per share for the year ended December 31, 2022 as the effect would reduce the net loss per share. Therefore, the weighted-average number of shares common stock outstanding used to calculate both basic and diluted net loss per share attributable to common stockholders is the same. The Company excluded the following potential common securities,

presented based on amounts outstanding at each year end, from the computation of diluted net income (loss) per share attributable to common stockholders for the years indicated because including them would have had an anti-dilutive effect:

	December 31, 2022	December 31, 2023
Convertible preferred stock (as converted to common stock)	11,889,698	—
Common stock options	2,200,602	723,655
Unvested common stock issued upon early exercise of stock options	23,031	—
Preferred stock warrant (as converted to common stock)	15,764	—
	14,129,096	723,655

14. Employee Benefit Plan

In January 2018, the Company adopted a defined contribution retirement savings plan under Section 401(k) of the Internal Revenue Code. This plan covers all employees who meet minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. The Company's contributions to the plan may be made at the discretion of the Company's board of directors. Total contributions by the Company during the years ended December 31, 2022 and 2023 was $0.2 million.

15. Subsequent Events

The Company has evaluated subsequent events for financial statement purposes occurring through February 15, 2024, the date when these financial statements were available to be issued and April 1, 2024 for the reverse stock split referenced below. No material subsequent events have occurred that require disclosure, except those referenced below.

The Company's board of directors approved a one-for-5.5972 reverse stock split of its issued and outstanding common stock, effective on April 1, 2024. Accordingly, all share and per share amounts for all periods presented in the accompanying financial statements and notes thereto have been retroactively adjusted, where applicable, to reflect the effects of the reverse stock split. Shares of common stock underlying outstanding stock options and common stock warrants were proportionately reduced and the respective exercise prices, if applicable, were proportionately increased in accordance with the terms of the agreements governing such securities. Shares of common stock reserved for issuance upon the conversion of the Company's preferred stock were proportionately reduced and the respective conversion prices were proportionately increased.

6,875,000 Shares

Contineum Therapeutics, Inc.

Class A Common Stock

PROSPECTUS

Goldman Sachs & Co. LLC **Morgan Stanley** **Stifel** **RBC Capital Markets**

April 4, 2024

Through and including April 29, 2024 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.